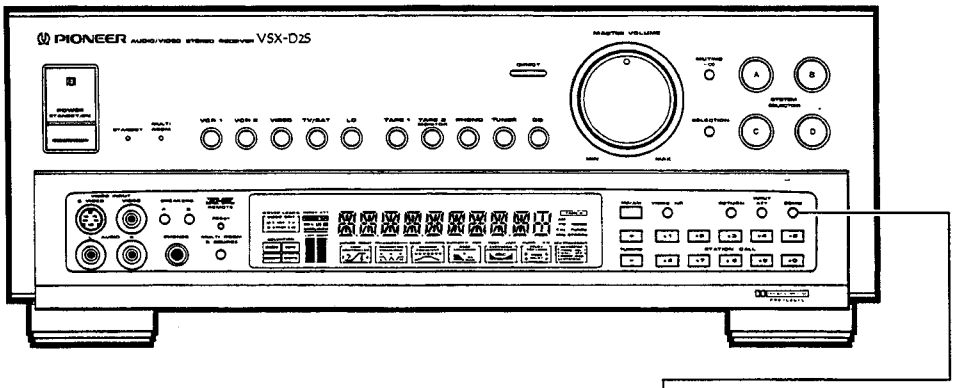
Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-D2S

NTSC



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

DEMO MODE

- The demonstration is activated by pressing the DEMO button while the power of the unit is ON.
  The demonstration will appear on the display and TV screen.
  The demonstration mode is automatically canceled when the demonstration ends.
- Press any other button to cancel the demonstration.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE
[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

RETURN function

This function returns the unit to a set of initial settings and the tuner ready to receive a broadcast. This is helpful during troubleshooting or when no sound is output. For details, refer to "FRONT PANEL FACILITIES" on page 23.

RESET function

Set MASTER VOLUME to minimum before presetting the RESET button.
Use this function when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation switches are pressed. Press the RESET button to return to normal operating conditions.
If you press this button, the entire contents of the memory are cleared.

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The Art of Entertainment

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The safety and operating instructions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged.
- Objects have fallen, or liquid has been spilled into the appliance.
- The appliance has been exposed to rain.
- The appliance does not appear to operate normally or exhibits a marked change in performance.
- The appliance has been dropped or the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrods. See Fig. A.

CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC – NATIONAL ELECTRIC CODE

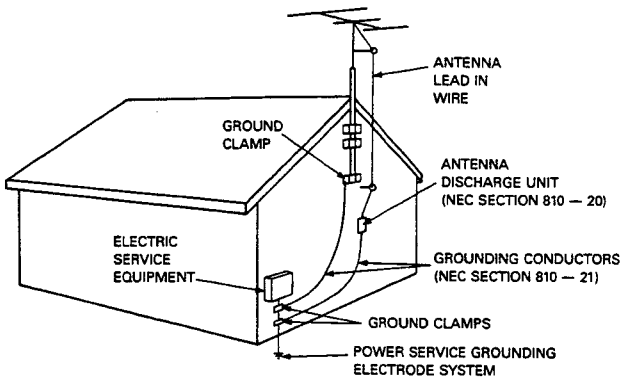


FIG. A

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

CONTENTS

BEFORE OPERATING

BEFORE OPERATING,
ADJUST THE POSITION OF THESE SWITCHES 4
ACCESSORY ITEMS 4
FEATURES 5
DOLBY SURROUND 6
BLOCK DIAGRAM 7

CONNECTION CHART

SETTING UP THE AM ANTENNA 8
AUDIO COMPONENTS 9
VIDEO COMPONENTS 11
ANOTHER AMPLIFIER 14
SPEAKERS 16
MULTI-ROOM & SOURCE 18
MULTI-AMPLIFIER SYSTEM 20

HINTS FOR BETTER RECEPTION 21

PANEL FACILITIES

FRONT PANEL FACILITIES 22
REAR PANEL FACILITIES 27

OPERATIONS

SELECTING SYSTEM 30
OPERATING TUNER 30
MANUAL/AUTO TUNING INTO STATIONS 30
DIRECT ACCESS TUNING 31
PRESET TUNING 31
OPERATING THE AUDIO COMPONENTS 32
PLAYBACK 32
RECORDING 32
OPERATING THE VIDEO COMPONENTS 33
PLAYBACK 33
VIDEO RECORDING 33

USING MULTI-ROOM AND SOURCE (MR & S) 34

REMOTE CONTROL UNIT

LOADING BATTERIES 35
REMOTE CONTROL RANGE 35
OUTLINE OF BUTTON LAYOUT 35
RECEIVER CONTROL BUTTONS 36
OPERATING OTHER COMPONENTS 37
VCR 1 OPERATION 37
VIDEO DISC PLAYER OPERATION 38
TV OPERATION 38
CD PLAYER OPERATION 39
TUNER OPERATION 39
DECK I, II OPERATION 40
DAT OPERATION 40
MODE CHECK BUTTON 40

PROGRAMMING 41
LEARN 41
EDIT 42
RETURNING TO THE INITIAL SETTINGS 43
REMOTE CONTROL CODES OF
OTHER MANUFACTURERS ALREADY PRESET 43

GUI OPERATION

OPERATING USING GUI 44
(Graphic User Interface)
OPERATING TUNER 46
MANUAL/AUTO TUNING 46
DIRECT ACCESS TUNING 46
PRESET TUNING 47
NAMING A STATION 49

OPERATING EXTERNAL COMPONENTS 50
CD PLAYER 50
CASSETTE DECK 50
LD PLAYER/CD CDV LD PLAYER 50
TV 51
TURNTABLE 51
VIDEO CASSETTE RECORDER 51

OPERATING VIDEO SIGNAL SELECTOR 51
EDITING VIDEO INPUT 52
SELECTION AND DESIGN 53
SELECTION 53
USER'S SYSTEM DESIGN 54
NAMING A SYSTEM 55

PARAMETER CONTROL 56
AMPLIFIER 56
TONE CONTROLLER 57
GRAPHIC EQUALIZER 57
PARAMETRIC EQUALIZER 58
BASS ENHANCER 58
EXPANDER/COMPRESSOR 58
PRO LOGIC PROCESSOR 59
BASIC S.F.C. (MOVIE) 60
BASIC S.F.C. (CONCERT) 60
BASIC S.F.C. (SPORTS) 60
ADVANCED S.F.C. 61

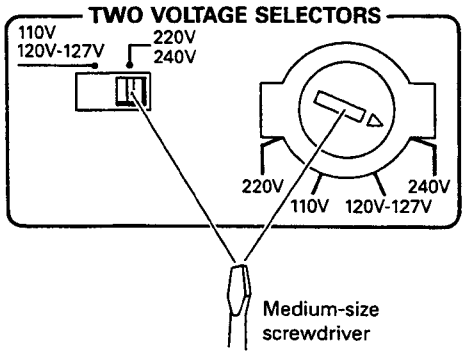
TROUBLESHOOTING 62
SPECIFICATIONS 64

BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K., and Australian models are not provided with these switches.
Main voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.
The line voltage selector switches are on the rear panel. Before your model is shipped from the factory, these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

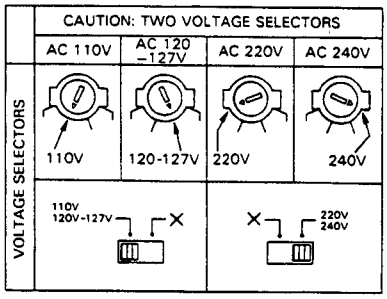
1. Use a medium-size screwdriver.
2. First, insert a screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert a screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.



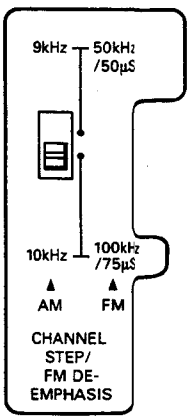
CHANNEL STEP/FM DE-EMPHASIS SWITCH (Not available on U.S. and Canadian models)

The unit has been factory-preset to the channel allocation and de-emphasis value for the area in which it is to be sold. If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.
[FM 100 kHz/75 µs, AM 10 kHz] position:
Set to this position for areas with an FM reception step of 100 kHz, de-emphasis 75 µs and AM 10 kHz.
[FM 50 kHz/50 µs, AM 9 kHz] position:
Set to this position, for areas with an FM reception step of 50 kHz, de-emphasis 50 µs and AM 9 kHz.

NOTE:
When unsure about the channel allocation and de-emphasis values of your area, consult your dealer for correct information.

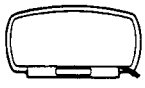


NOTE:
Both switches must be in the same switch setting; otherwise, unit can be damaged.

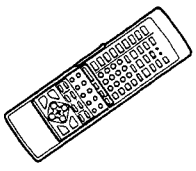


ACCESSORY ITEMS

FM T-type Antenna



AM Loop Antenna



Audio/Video programmable remote control unit

Alkaline dry cell battery × 2 (size "AA" (LR6/AM-3))

FEATURES

■ Design function lets you create your own sounds

- This unit features a total of 10 built-in functions, for example, a Pro Logic Processor, a Sound Field Controller (SFC), a Frequency Equalizer, and an Expander, etc. You can create your own original systems by combining any four of these functions, and register them (A to D) for recall later.
- Besides the four original systems mentioned above, there are four factory preset systems for first-time users.

■ Used with a TV, the GUI (Graphic User Interface) function offers on-screen indications of system status during operation

- On-screen display lets you confirm system configuration, system operations, and the operation status of other components.

■ Wide range of video functions

- Built-in Y/C separation circuitry using a comb filter allows output in both S-video and composite video formats for composite video inputs. S-video input can also be output in both S-video and composite video formats.
- Equipped with VNR (Video Noise Reduction) circuitry.
- Front panel VIDEO inputs feature AV FADER and BGM MIXING editing functions.

■ Equipped with the Accurate Imaging System

- Features a built-in 5-channel amplifier. Using FRONT and CENTER amplifiers of the same quality enables precise reproduction of a surround sound field.
- FRONT and CENTER amplifiers can connect to 4-ohm speakers. (There are limits to connection possibilities. Refer to page 29.)
- The CENTER amplifier features terminals for dual speakers, enabling installation of CENTER speakers on either side of the TV.

■ Multi-Room & Source

- If you install the system in one room and speakers in another, using this unit with an optional MR-100 Multi-Room Remote Control Sensor Unit lets you enjoy different sources at the same time.
- Even when enjoying surround sound using a 5-channel amplifier, Multi-Room & Source operation is possible if another stereo amplifier is connected to the MULTI-ROOM AUDIO OUT terminals.

■ Digital Simulated Stereo System (DSSS)

■ Input Attenuator

- Depending on the component or source, input level to this unit may be too high, possibly resulting in a distorted sound during playback. For this reason, there's a built-in attenuator to decrease the level, thereby eliminating distortion.

■ Mixed preout terminal for superwoofer Left/Right/Center channels

■ Audio/Video programmable remote control unit

DOLBY SURROUND

• DOLBY PRO LOGIC SURROUND

Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND mark) playback.
DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis.
You can clearly perceive the directions and source of the music. Real flow of sound can also be re-created naturally using this feature. It gives the feeling of being in an outstanding and expansive sound field.
When using DOLBY PRO LOGIC SURROUND, a delay time setting of 20 ms is commonly used. Use a different setting if you prefer.

NOTE:
DOLBY PRO LOGIC SURROUND can be left ON with stereo sources not bearing the DOLBY SURROUND mark. However, with monaural sources, there is only sound from the center speaker.

• DOLBY 3CH LOGIC

By adding the signal for the rear speakers to the signal for the front speakers, the front three channels (front L, front R, and CENTER) provide a much wider, more spacious sound field than possible during ordinary stereo playback.

DOLBY PRO LOGIC SURROUND is equipped with the following 3 positions for the CENTER MODE.
When using DOLBY 3CH LOGIC, you can select NORMAL.

When using a center speaker:

• NORMAL
Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. So you can use a relatively small size speaker as the center speaker.

• WIDE
If you use a large size center speaker, choose this setting. The full frequency range of the center speaker, from low to high, is routed to the center speaker.

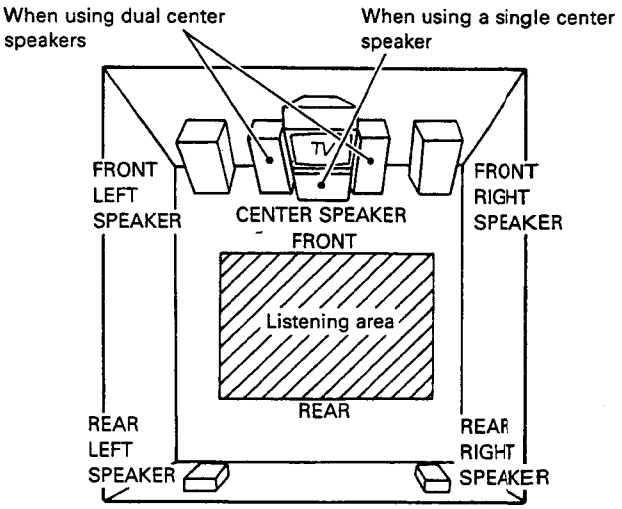
When not using a center speaker: DOLBY PRO LOGIC SURROUND

• PHANTOM
The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

SURROUND SPEAKER INSTALLATION EXAMPLE

To get the best effect out of the surround system, place the speakers as shown below.

An example for center speaker location



NOTE:
- *To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particularly important for the center speaker since it is usually located closest to the TV.*
- *Position the left and right channel speakers at equal distances from the TV set and approximately six feet from each other.*
- *Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.*
- *Rear speakers are best positioned slightly above ear level.*

Note:
DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC will not operate correctly if the signal passes through a graphic equalizer. When using DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC, turn off the TAPE 2 switch or set the graphic equalizer for flat response or to its "through" (defeat or off) setting, if it has one.

*

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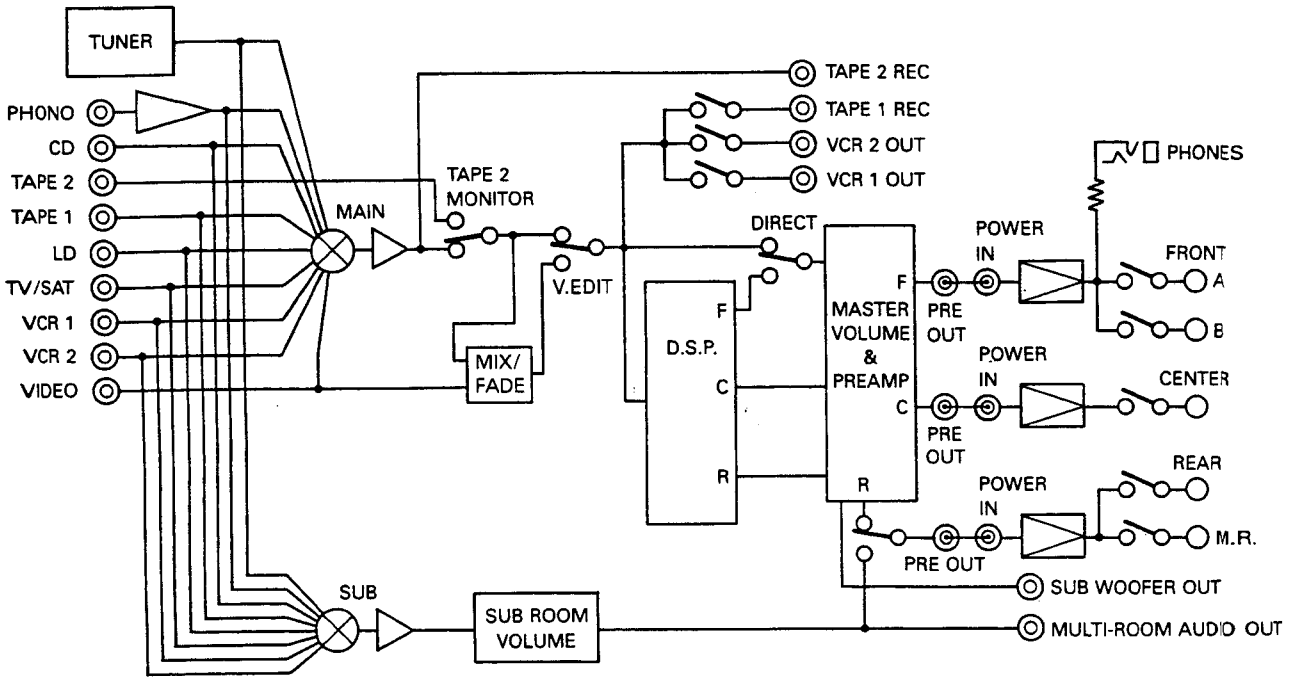
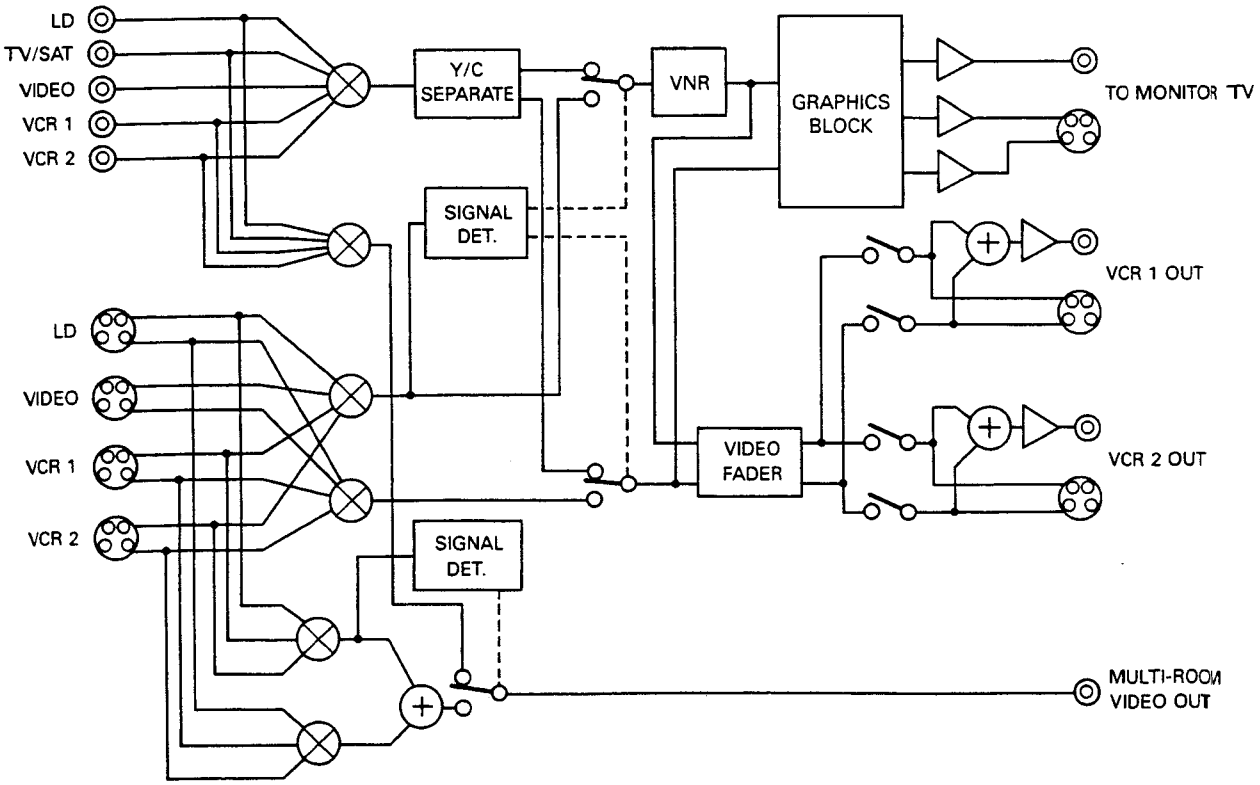
BLOCK DIAGRAM



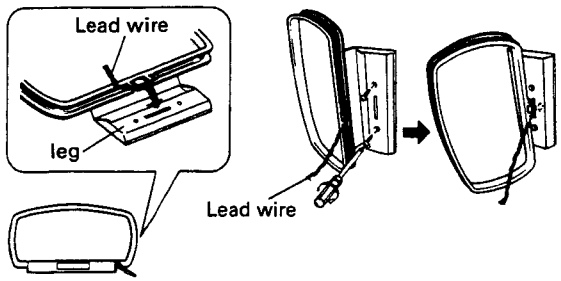


CONNECTION CHART

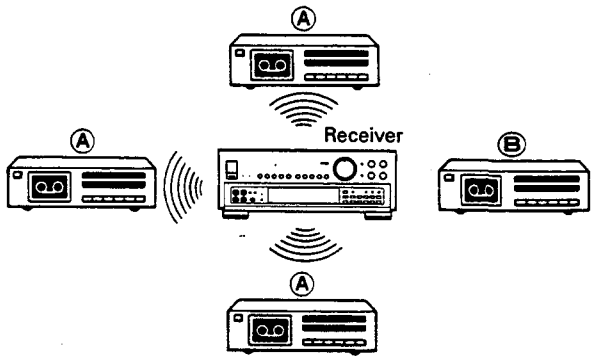
• Illustration shows U.S. and Canadian models.

Setting Up the AM Antenna

- Insert the claw on the bottom of the antenna into the groove in the leg.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.
- Use the attachment hole in the leg to screw to wall or other location, then insert the claw on the bottom of the antenna into the groove in the leg (fixing the antenna in the direction that gives the best reception).



Precaution regarding installation position of cassette deck.
If the cassette deck is installed in the Ⓐ positions as shown in the drawing below, it may be adversely affected during playback. If possible, it's better to install it in the Ⓑ position.



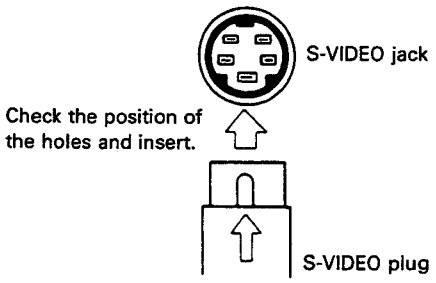
THE S-VIDEO CONNECTORS

When using a VCR 1, VCR 2, LD, VIDEO and TO MONITOR TV which has S-VIDEO connectors, they can be connected to the S-VIDEO connectors.
For the operation of components connected to S-VIDEO connectors, refer to the instruction manuals of the corresponding components.

NOTE:

- *In this unit, the S-VIDEO connectors (Y-C separate) and the regular pin jacks are dependent, so any signal input through a pin jack is output from the pin jack and the S-VIDEO connector, and any signal input through an S-VIDEO connector is output from the pin jack and S-VIDEO connector.*
- *The S-VIDEO connector is for video portion only, so be sure to also make audio connections.*

How to use S-VIDEO connectors



For the method of switching the TV monitor S-VIDEO connector/VIDEO jack, refer to the TV monitor's instruction manual.

POWER-CORD CAUTION

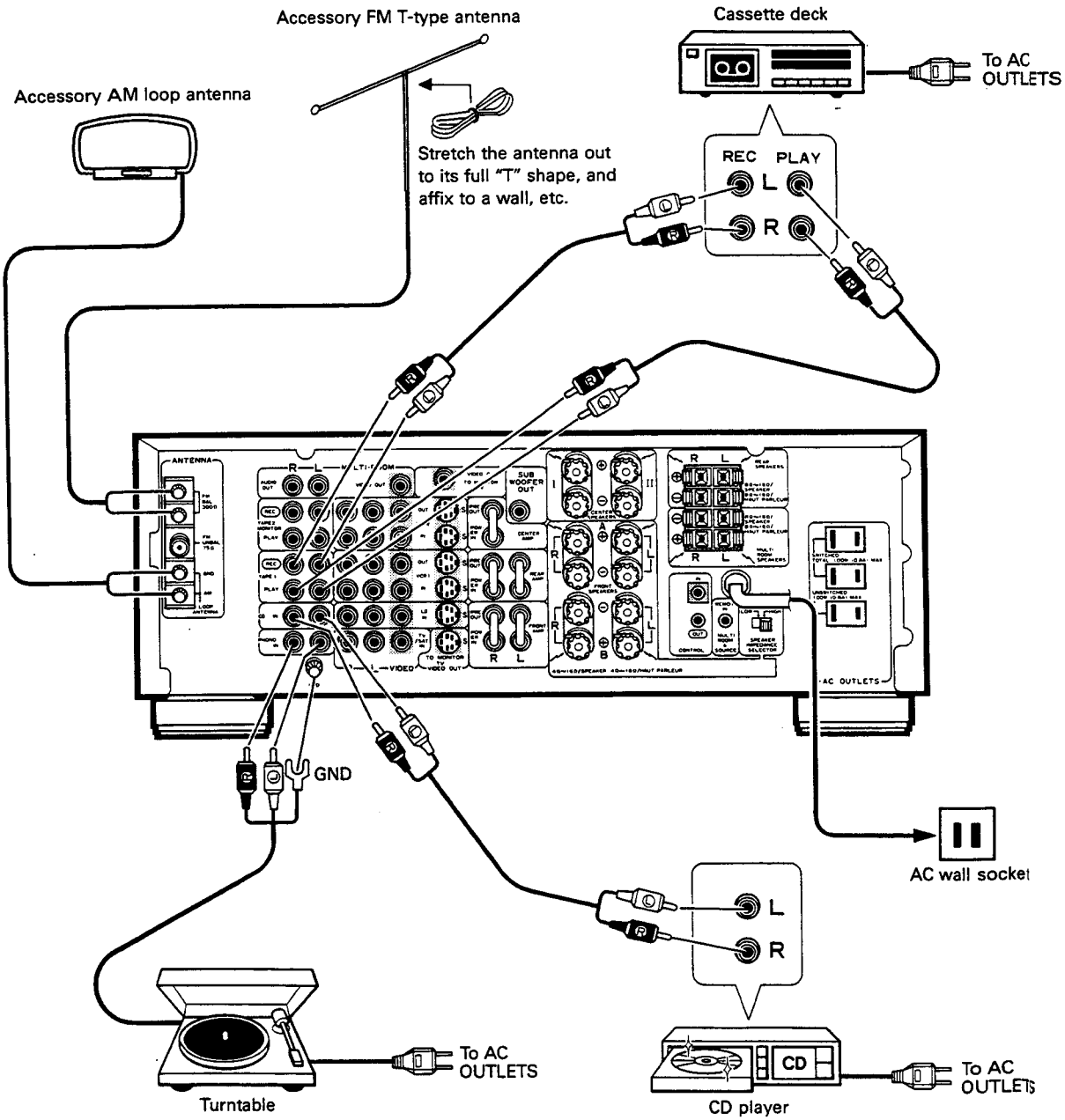
Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc., on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

Basic Audio Component Connections

- FM, AM antenna connection
- Turntable
- First cassette deck
- Compact disc player

NOTE FOR FM T-TYPE ANTENNA:
Stretch the antenna out to its full length, and affix it to a wall, etc.

NOTE FOR AM LOOP ANTENNA:
The antenna should be placed at a distance from the receiver, and should not be allowed to touch metallic objects.
Avoid placing it near CD players, personal computers, television sets, and other devices generating radio frequencies.

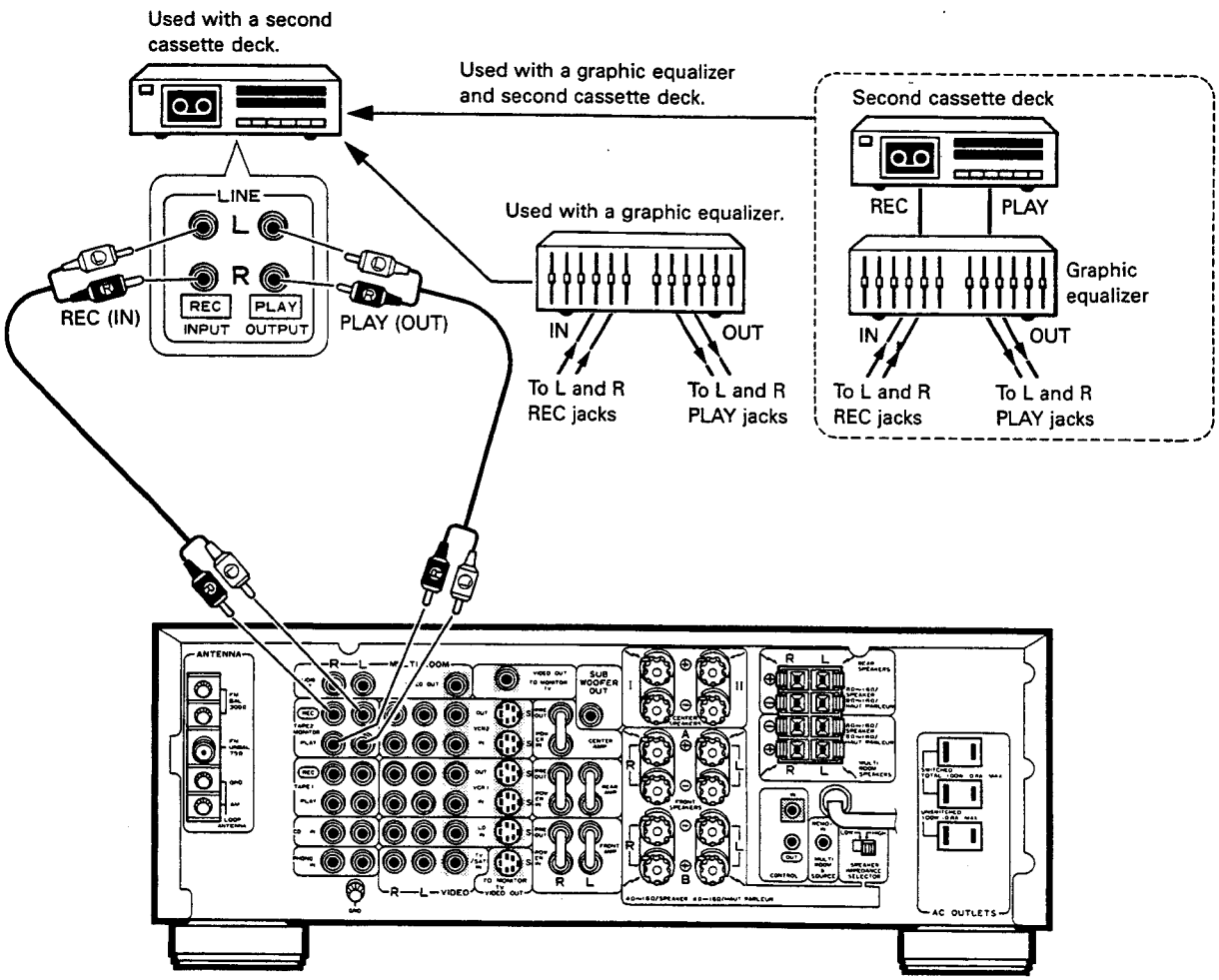


CONNECTION CHART

Additional Audio Components

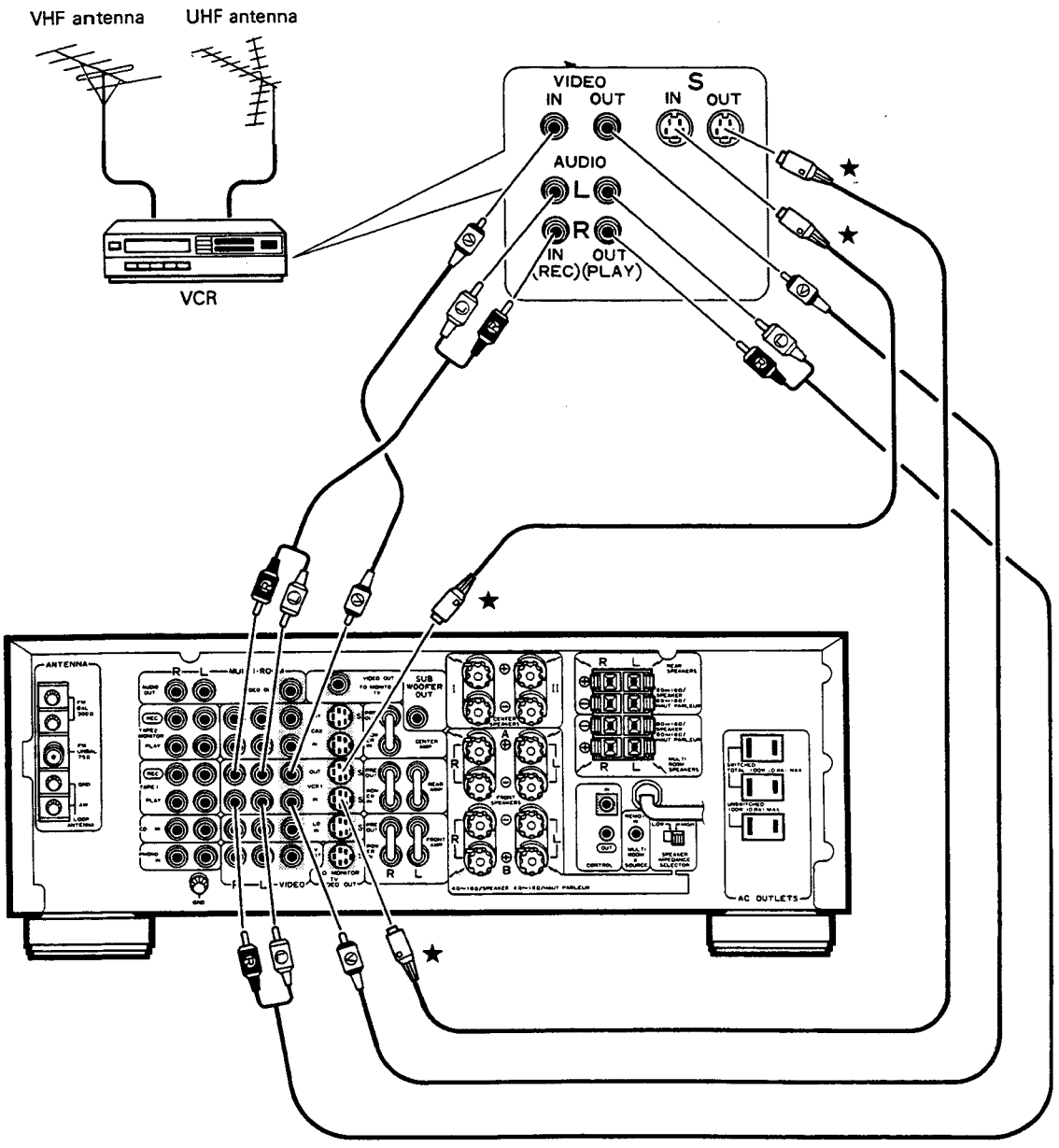
- Second cassette deck (Graphic equalizer)

NOTE:
Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.
When using Dolby Surround, turn off the TAPE 2 MONITOR button or set the graphic equalizer for flat response or to its through (defeat) setting.



Basic Video Component Connections (1)

• First VCR



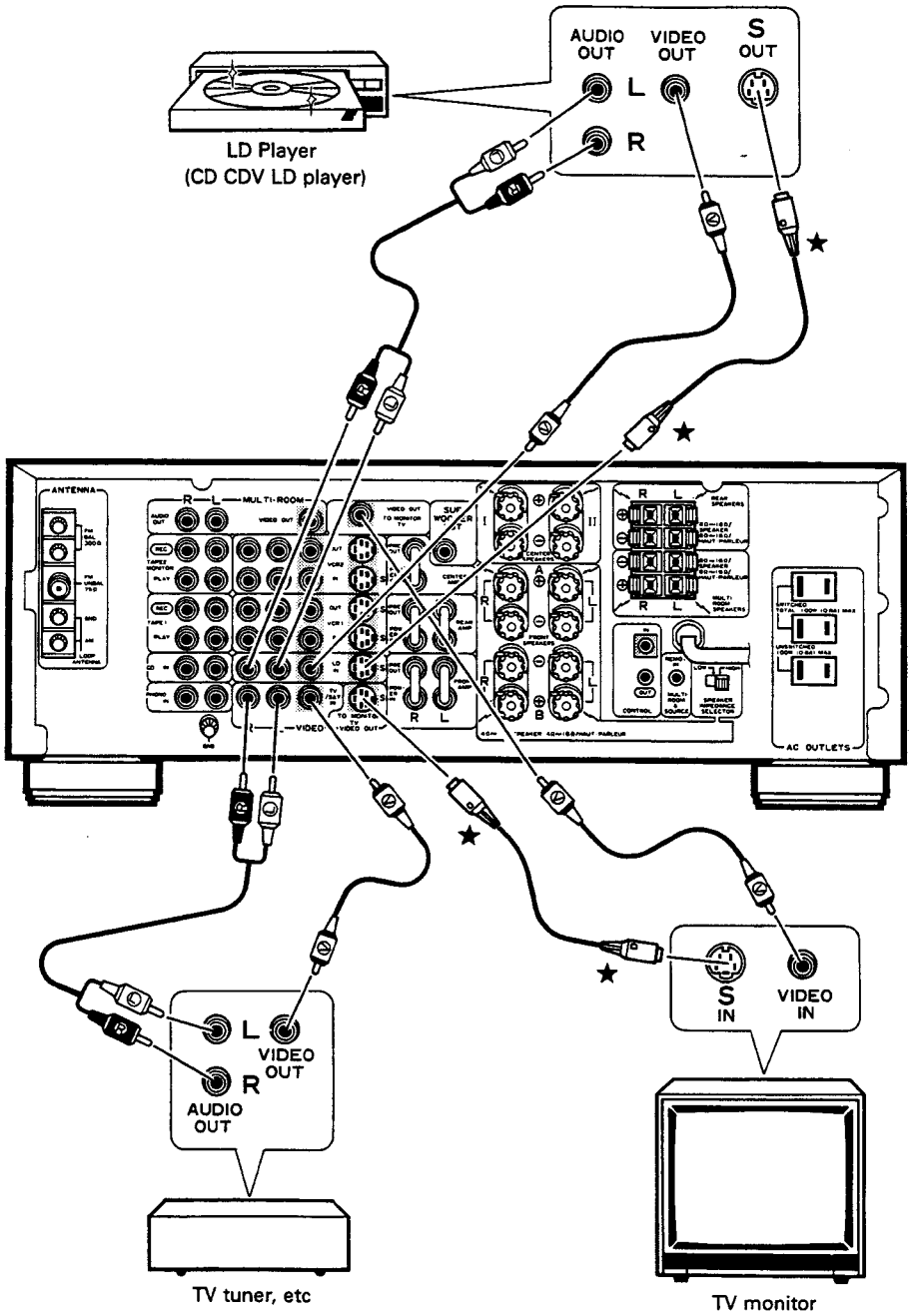
★ S (video) connection. See page 8.

CONNECTION CHART

Basic Video Component Connections (2)

- LD Player (CD CDV LD player)
- TV tuner
- TV monitor

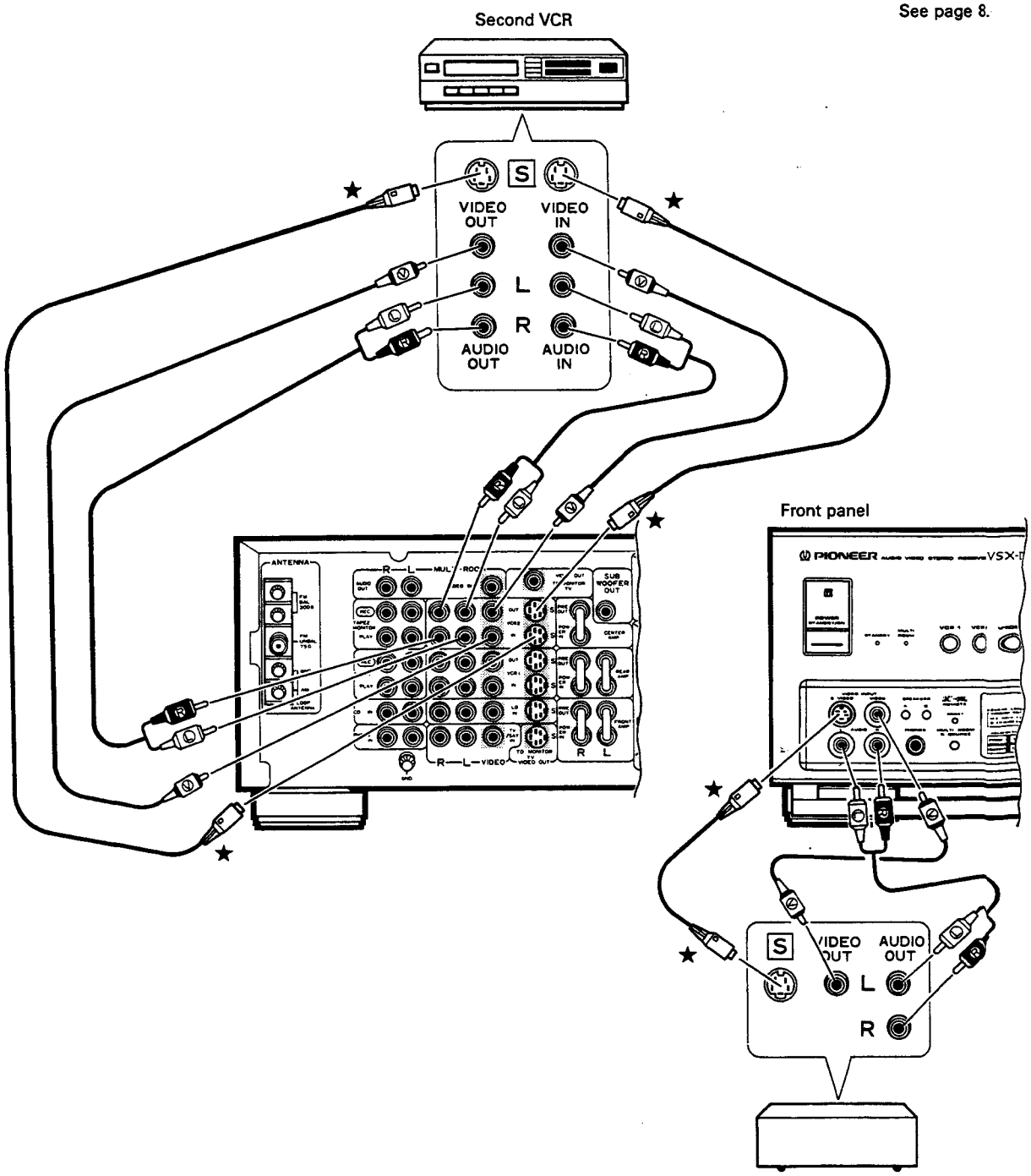
★ S (video) connection. See page 8.



Additional Video Components

- Second VCR
- Video equipment
  (VCR (for playback only) or TV camera, etc.)

★ S (video) connection.
See page 8.



VCR (for playback only), or another component such as a TV camera.

When used with another amplifier (power amplifier, preamplifier) [FRONT]

(a)
When using the preamplifier of the receiver and using a separate stereo power amplifier to increase power.
(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.

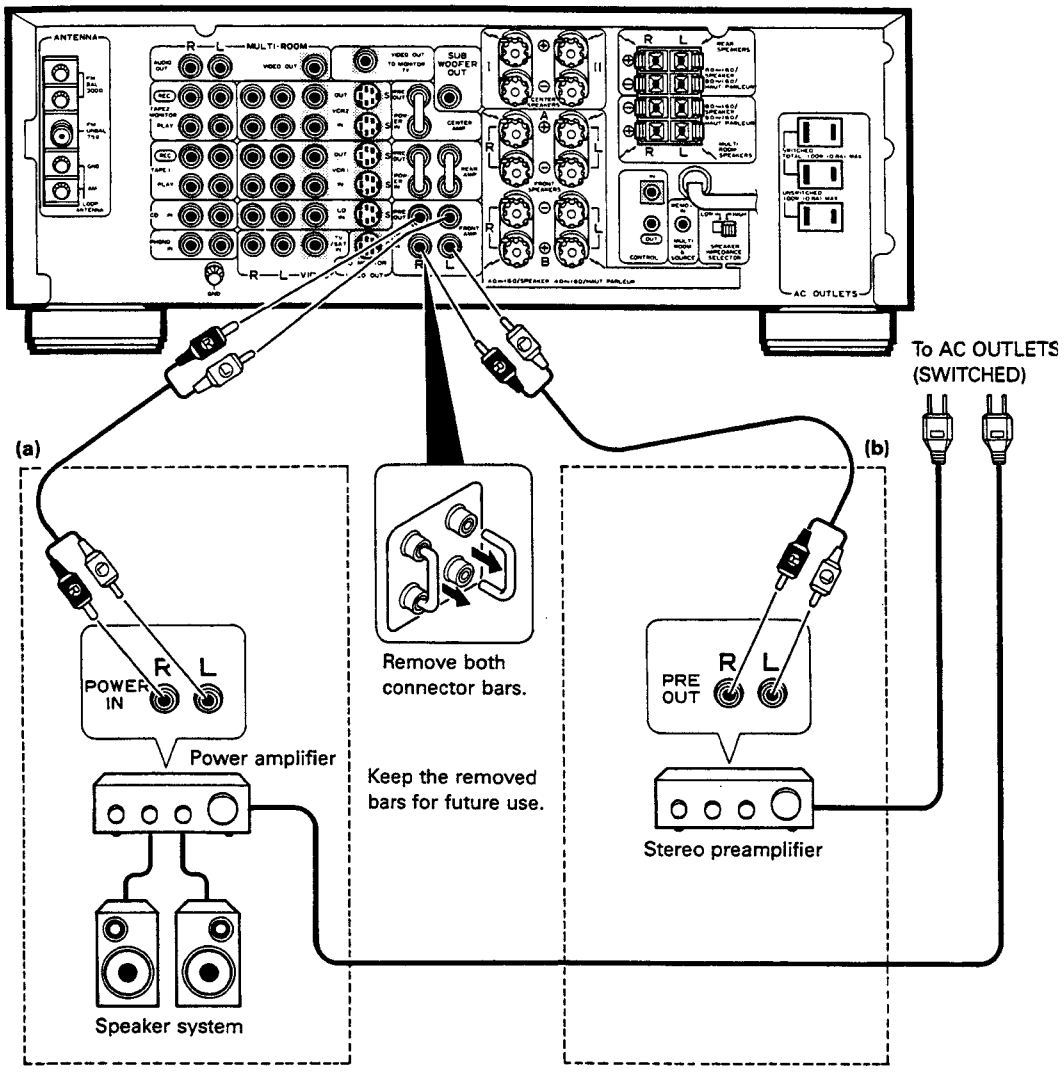
Caution for use of AC OUTLETS:
Components which have electrical power consumption greater than that indicated on the rear panel of this unit cannot be connected. Please take necessary precautions.

When using PRE OUT jack:
Use these jacks when using a separate amplifier as the power source instead of this unit, and listening to speakers which are connected to the separate amplifier.

NOTE:
Sound from the speaker channels (front, center, rear), from which the connector bars have been removed in order to make a connection, cannot be heard if the speakers are connected to the unit.

When using POWER IN jacks:
Use these jacks when this unit is being used as the power amplifier for the surround channels (front, center, rear).
With separate surround processing components, each corresponding channel (front, center, rear) which has a sound output should be connected correspondingly.

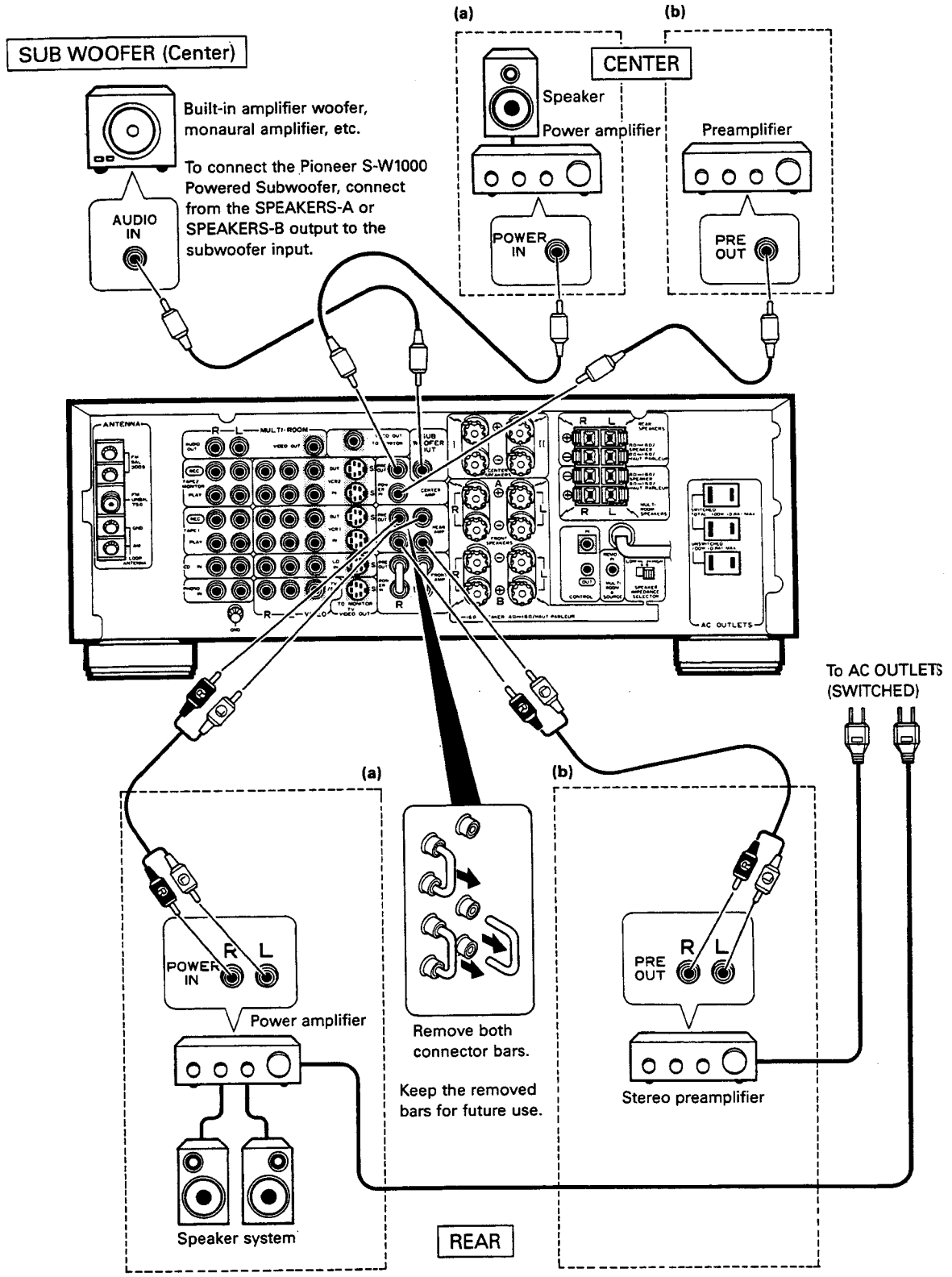
NOTE:
When the connector bars are removed to make connections, sound from all channels of separate components connected to this unit's input terminals, as well as broadcasts received by the unit, cannot be heard via speakers connected to the unit.



[REAR and CENTER]

(a)
When using the preamplifier of the receiver and using a separate stereo power amplifier to increase power.

(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.



CONNECTION CHART

Speakers Connection

- Front L, R speakers
- Front center speaker
- Rear L, R speakers

When connecting speakers to the FRONT SPEAKERS B terminals, the procedure is the same as that used for connecting speakers to the FRONT SPEAKERS A terminals.

NOTE:

- *Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.*
- *If you have one pair of speakers only, connect it to front speaker terminals A or B.*

Front and Center speakers impedance
Set the IMPEDANCE SELECTOR switch to the nominal impedance of your speakers.

- Position HIGH:

Front	Center
A or B; 8 Ω (1 pair)	4 Ω to 16 Ω (DUAL; 8 Ω to 16 Ω)
A and B; 16 Ω (2 pairs)	

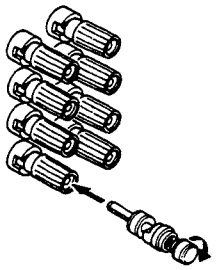
- Position LOW:

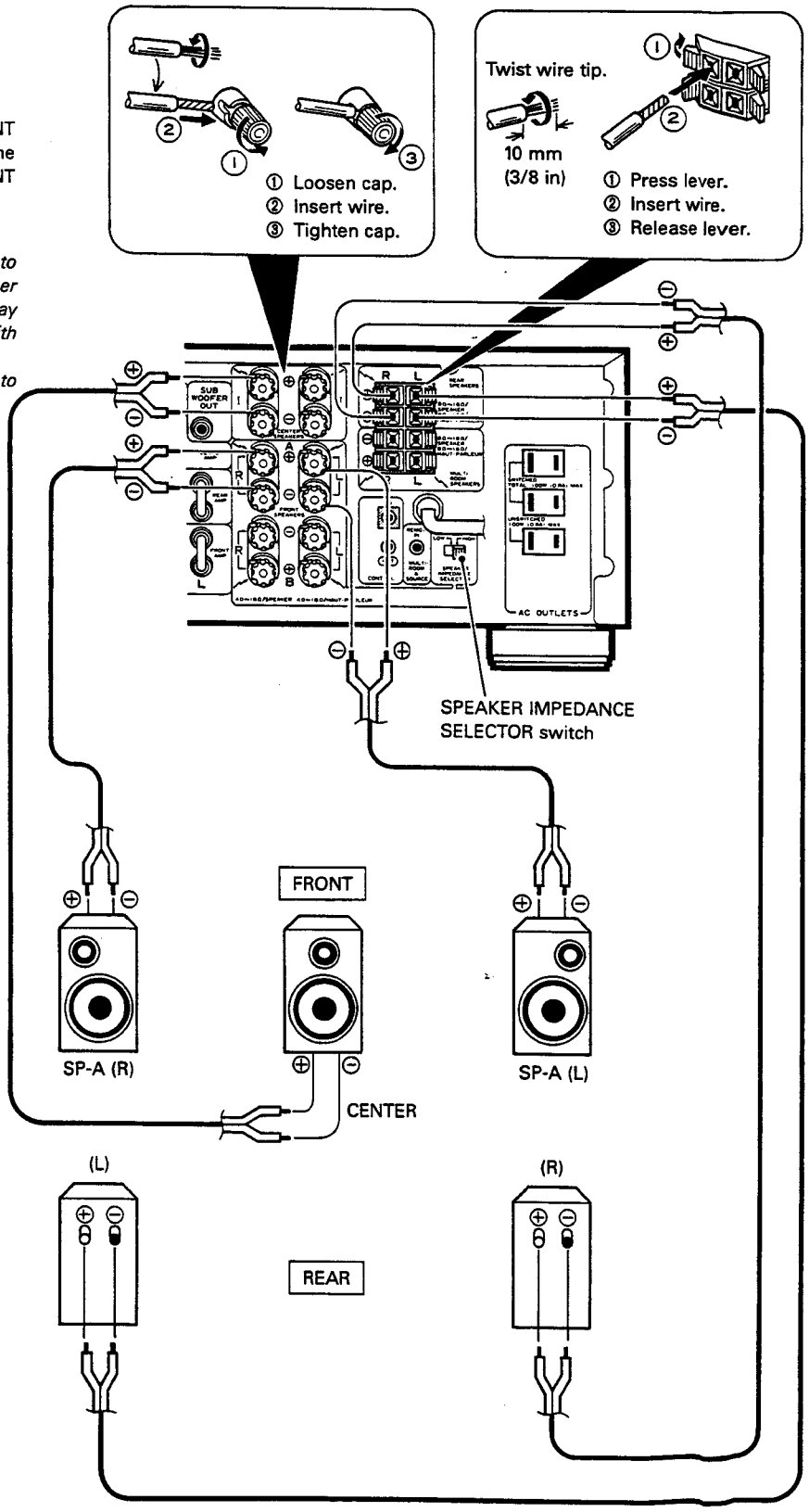
Front	Center
A or B; 8 Ω (1 pair)	4 Ω to 16 Ω (DUAL; 8 Ω to 16 Ω
A or B; 4 Ω (1 pair)	8 Ω to 16 Ω (DUAL; 16 Ω)
A and B; 8 Ω (2 pairs)	

Rear speaker impedance
Connect rear speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:
Be sure to observe speaker polarity.

U.S. and Canadian models only.
This unit's FRONT A and B speaker terminals accept banana plugs. Please refer to the plug's manual for instructions on use.



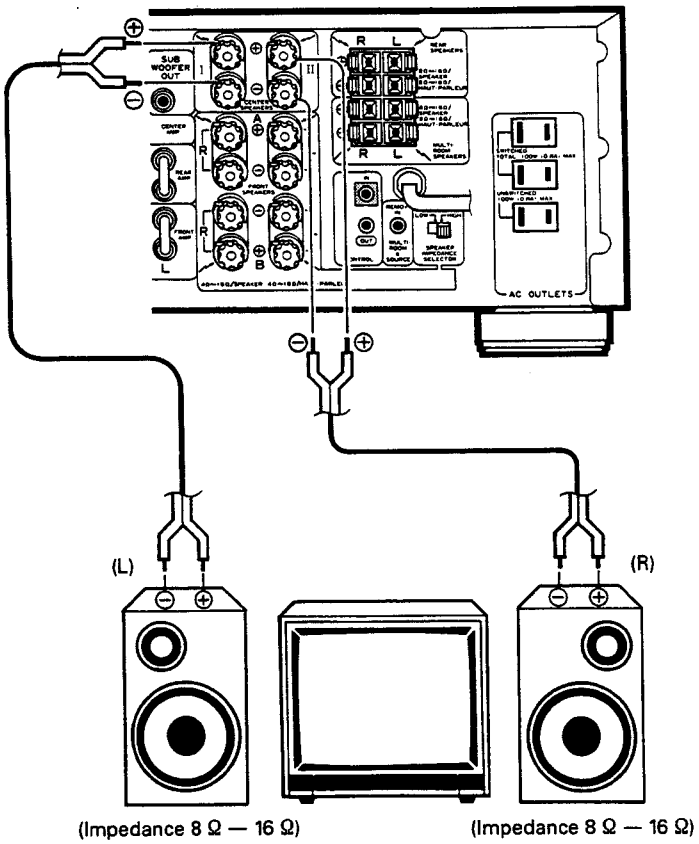


Connecting Two Speakers for Dual Center

There are two terminals for center speakers on the receiver, so you can connect two speakers. When you can't install a speaker under or behind your TV, installing speakers either side of the TV as a center speaker is just as effective.

> If you install speakers near a TV, use magnetically shielded speakers.

Center speaker impedance:
Connect two center speaker systems with a nominal impedance of between 8 and 16 Ω (See SPEAKER IMPEDANCE SELECTOR switch on page 29).



(Impedance 8 Ω — 16 Ω) (Impedance 8 Ω — 16 Ω)

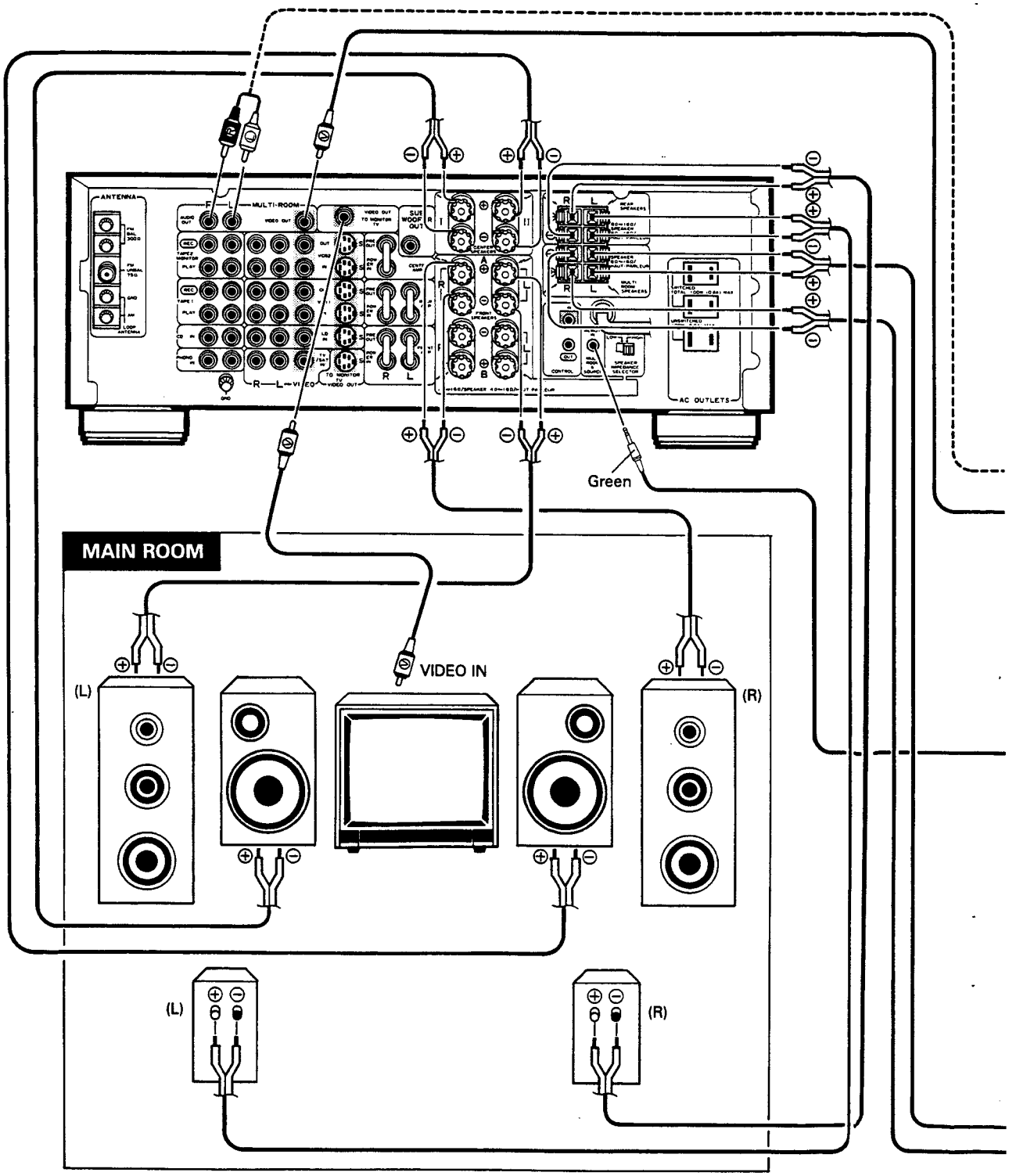
CONNECTION CHART

Connecting Multi-Room and Source

- TV Monitor
- Speakers
- Multi-Room remote control sensor unit MR-100 (option)

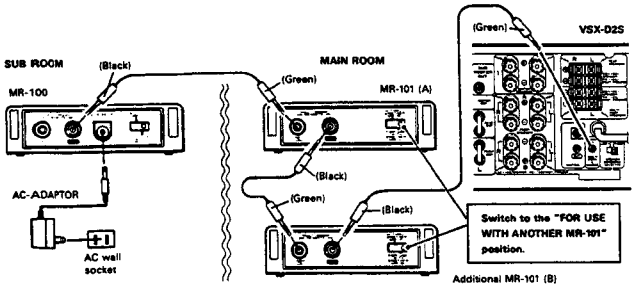
NOTE:

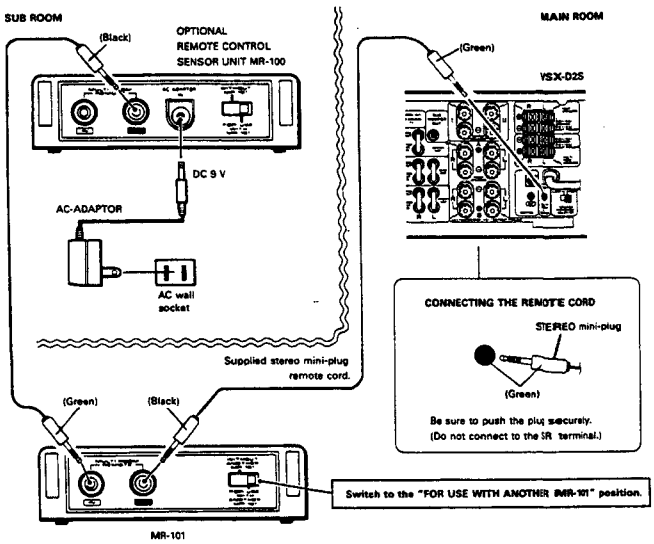
- *Be careful not to make the wrong connections for CONTROL IN/OUT (black) and MULTI-ROOM REMOTE IN (green).*
- *If you connect to the CONTROL jacks of other components, such as a CD player or cassette deck, bearing the SR mark, you can also enjoy remote control of these components from sub room. (For details concerning connections, refer to page 28.)*



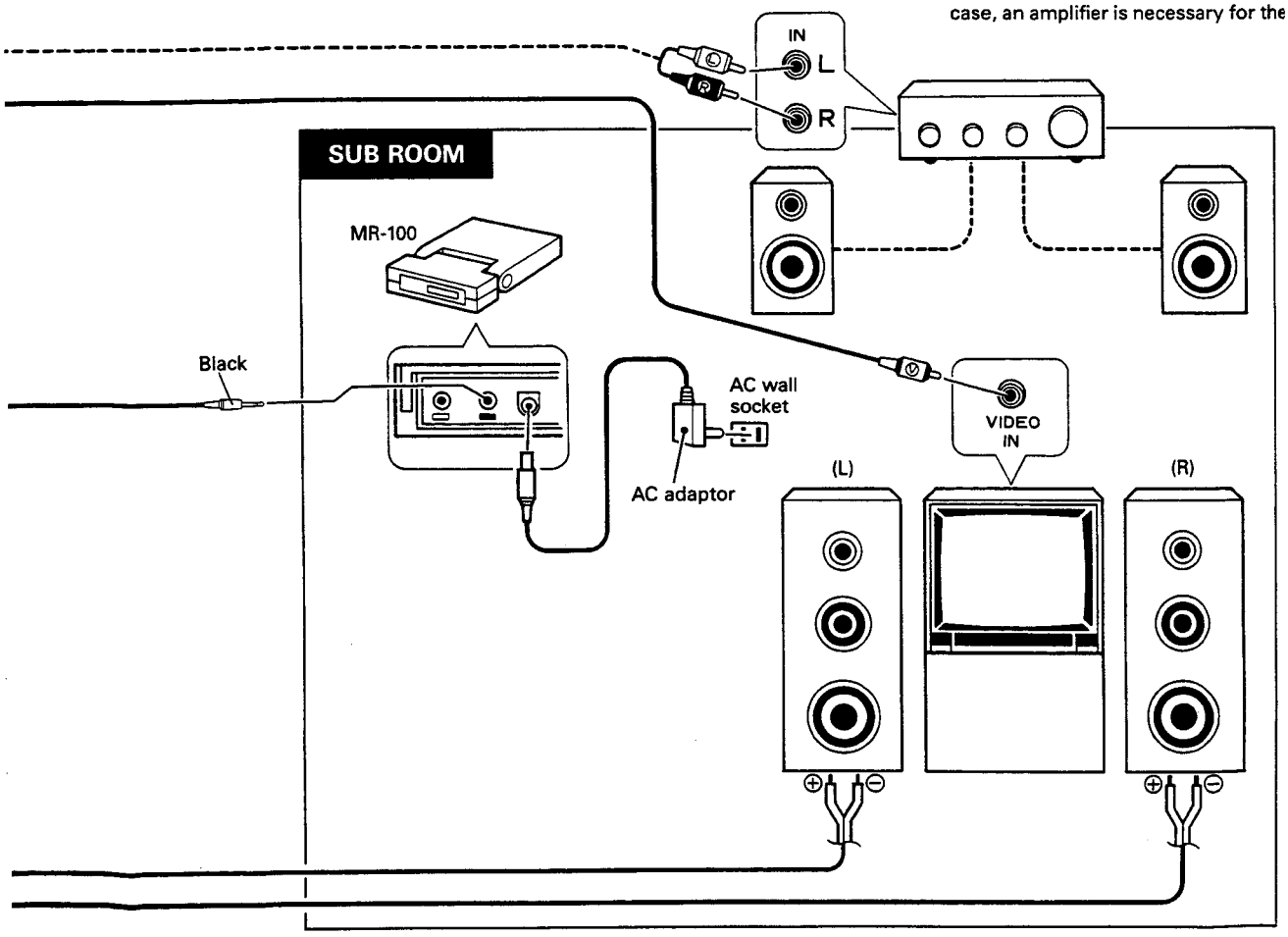
Precautions concerning Multi-Room & Source operation

When using this unit with the MR-100 multi-room system remote control sensor unit and MR-101 multi-room system remote control emitter for Multi-Room & Source operation, even when not using another MR-101, be sure to set the slide switch on the MR-101 rear panel to the "FOR USE WITH ANOTHER MR-101" position. Correct operation will not be possible if the switch is in the "WITHOUT ANOTHER MR-101" position.



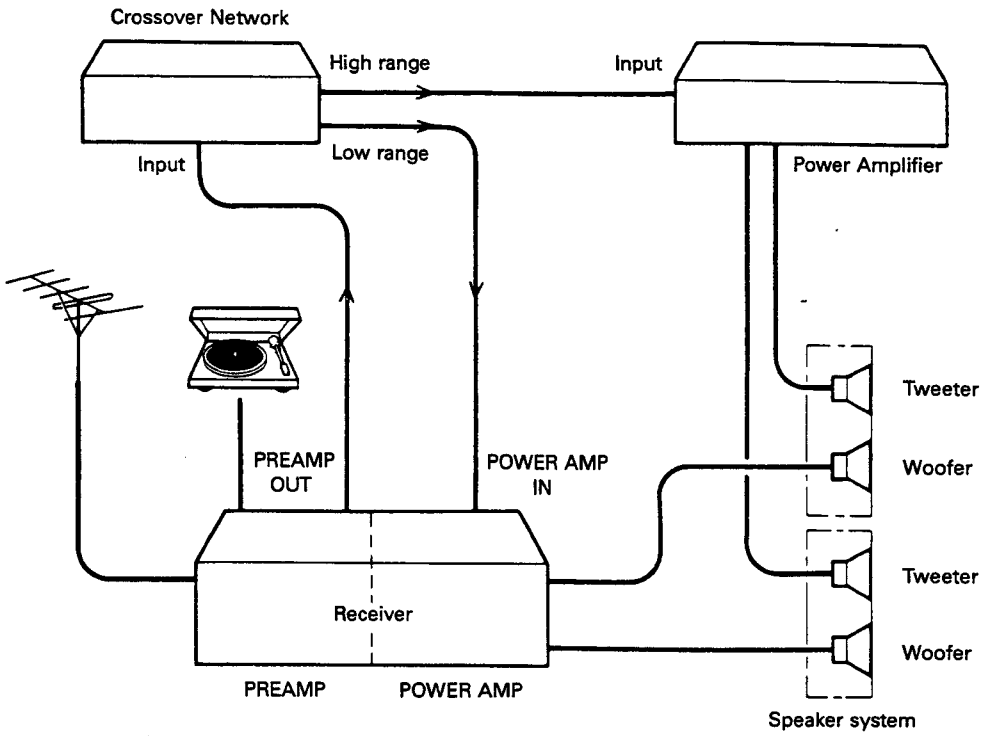


• While using rear speakers in the main room, you can also enjoy Multi-Room & Source operation by using the MULTI-ROOM AUDIO OUT jacks. In this case, an amplifier is necessary for the sub room.



CONNECTION CHART

Application example- MULTI-AMPLIFIER SYSTEM



HINTS FOR BETTER RECEPTION

OUTDOOR FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-, 5-, or 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

CAUTION:

Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna, or an outdoor antenna should be installed.

INDOOR AM ANTENNA

Use a vinyl insulated wire (5 — 6 m, 17 — 20 feet) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

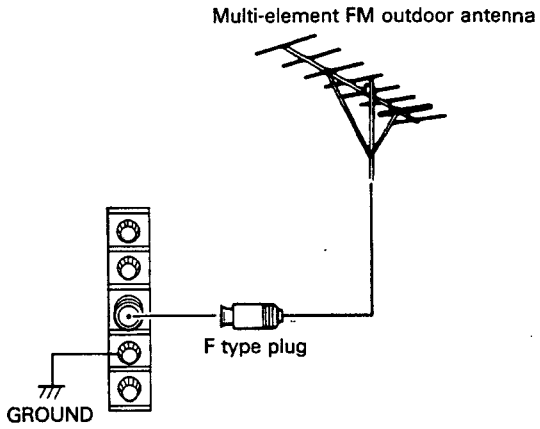
OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl insulated wire should be installed outside and fixed in place.

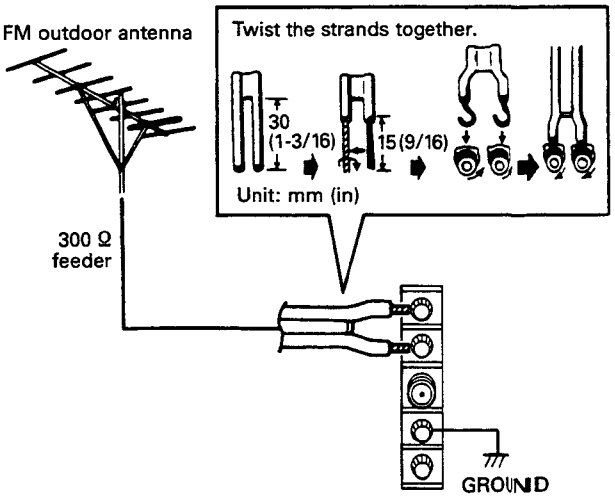
NOTE:

Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

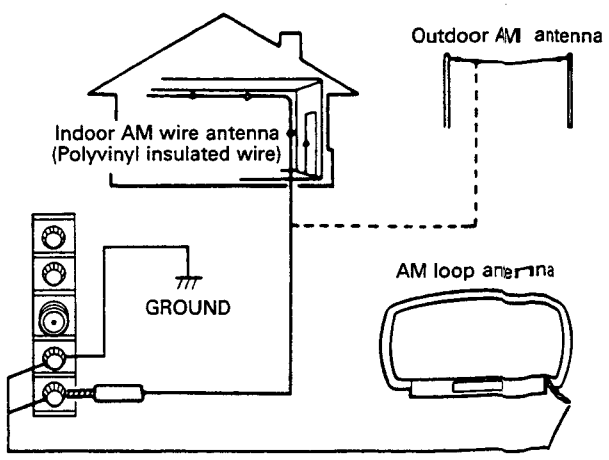
Connecting a coaxial 75 Ω cable



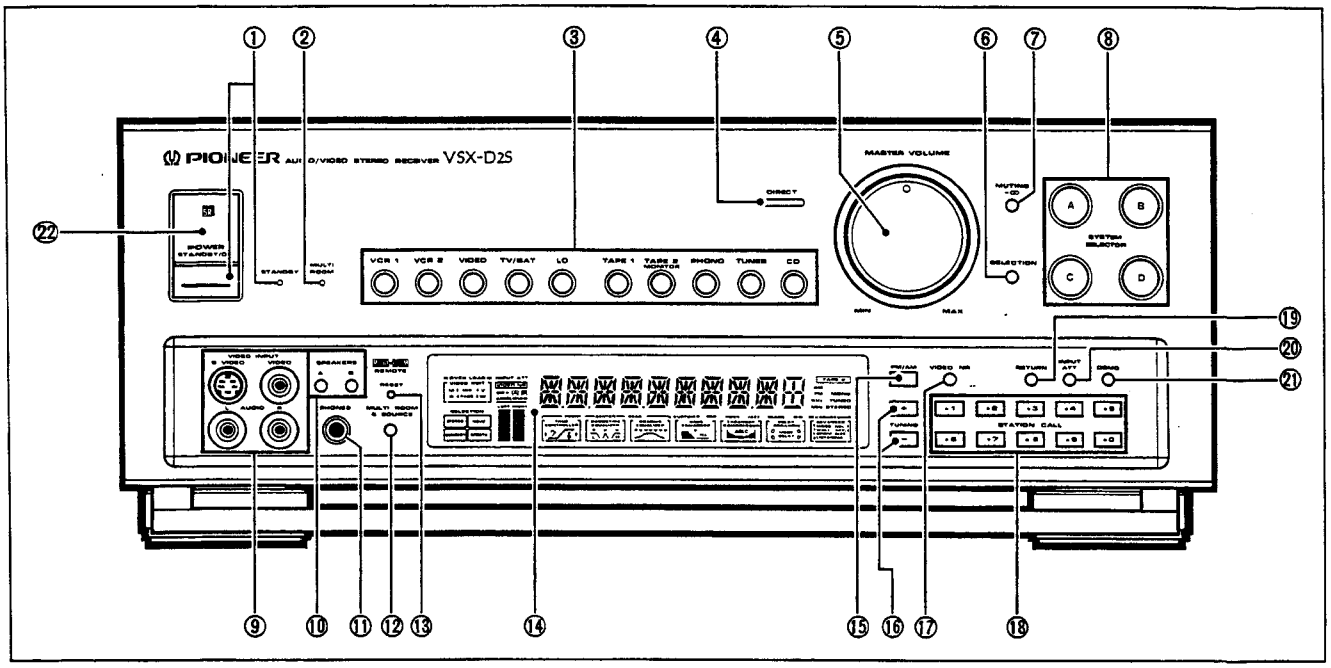
Connecting a 300 Ω feeder



AM antenna connection



FRONT PANEL FACILITIES



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON ..... When set to the ON position, power is supplied and the unit becomes operational.

STANDBY .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The STANDBY indicator lights when the power is STANDBY, and goes out during ON.

② MULTI ROOM indicator

This lights when the Multi Room & Source function is switched ON with the MULTI ROOM & SOURCE button (⑫).

③ Input selector buttons

• Video input selector

VCR 1 : Press when performing playback on a first VCR unit.

VCR 2 : Press when performing playback on a second VCR unit.

VIDEO : Press when performing playback on a TV camera or VCR connected to VIDEO INPUT jack on the front panel.

TV/SAT : Press to watch TV broadcasts from the TV tuner connected to the rear panel TV/SAT IN jacks.

LD : Press when performing playback on an LD player.

• Audio input selector

TAPE 1 : Press when performing playback on a cassette deck.

TAPE 2 MONITOR
: Press when performing playback on a second cassette deck and when monitoring recording. On/off switching is independent of other input selector buttons.

PHONO : Press when playing records on a turntable.

TUNER : Press when listening to radio broadcasts.

CD : Press when playing compact discs on a CD player.

NOTE:
High level input may result in distortion because of the digital processing performed by this unit's Digital Signal Processor. This is particularly true when using a turntable with a high output cartridge. If there is distortion due to an excessively high input level from the cartridge or another component, use the INPUT ATT button (⑳) to adjust input level.

④ DIRECT button/indicator

Press this to listen to source sound without passing the audio signal through sound quality and balance adjusting circuitry.
The SFC mode, and rear and center speakers are automatically switched off.

⑤ MASTER VOLUME control

Use to adjust the sound volume from the front, center, and rear speakers. When you adjust volume by remote control, the indicator on the knob flashes.

⑥ SELECTION button

This recalls in sequence the four factory preset system configurations for first-time users.

STEREO → MOVIE → CONCERT → SPORTS →

STEREO : AMPLIFIER + GRAPHIC EQUALIZER + EXPANDER/COMPRESSOR

MOVIE : AMPLIFIER + PRO LOGIC PROCESSOR + BASIC SFC (MOVIE) + TONE CONTROLLER + BASS ENHANCER

CONCERT : AMPLIFIER + BASIC SFC (CONCERT) + GRAPHIC EQUALIZER + BASS ENHANCER
SPORTS : AMPLIFIER + BASIC SFC (SPORTS) + PARAMETRIC EQUALIZER + EXPANDER/COMPRESSOR + BASS ENHANCER

⑦ MUTING −∞ button

Press to temporarily cut off the sound volume. When pressed again, the sound will return to its previous level. During MUTING operation, the MASTER VOLUME knob indicator flashes.

⑧ SYSTEM SELECTOR A, B, C, D, buttons

Use these to recall the systems you created by combining add-on functions with the DESIGN function.
When used with the GUI (Graphic User Interface) function, the DESIGN function is operated with on-screen (TV) indications.

⑨ VIDEO INPUT jacks

Video components such as a TV camera or VCR, etc. can be connected here.

⑩ SPEAKERS A, B buttons

These are ON/OFF buttons for the speaker systems. When switched ON, the speaker indicators (SP ▷ A B) in the display section light.

⑪ PHONES jack

Connect the plug on your headphones to this jack. To hear only through the headphones, set all SPEAKERS A and B buttons to the OFF position.

NOTE:
There are no ON/OFF switches for the rear and center speakers, so when you want to listen only on headphones, set to the STEREO mode. If you want to listen to other than the STEREO mode, reduce rear and center volume levels using the remote control.

⑫ MULTI-ROOM & SOURCE button (See page 34)

Use in combination with the separately sold MR-100 Multi-Room remote control unit.
When this button is on, the source selected with the input selector button at that time is set to the Sub room function. The selected sub-function's sound is output through MULTI-ROOM AUDIO OUT jacks and MULTI-ROOM SPEAKERS, and the video signal is output through the MULTI-ROOM VIDEO OUT jack. If you install speaker systems connected to the MULTI-ROOM SPEAKERS terminals in a different room, you can enjoy different sources in two different rooms with a single main unit.

⑬ RESET button

Use this when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation buttons are pressed. Press this button to return to normal operating conditions.
If you press this button when the power is ON, the unit switches to POWER STANDBY, and the entire contents of the memory are erased.

⑭ Display section (See page 24)

⑮ FM/AM button

Use this to switch between FM and AM frequency band reception.

⑯ TUNING +, − buttons

+: Performs tuning in ascending frequency order.
−: Performs tuning in descending frequency order.

⑰ VIDEO NR button

Press ON, and picture noise interference is reduced.
When switched ON, the VIDEO NR indicator in the display section lights.

NOTE:
When TV broadcast reception conditions are extremely poor, or when playing back a badly recorded video cassette tape, noise reduction may not be entirely effective.

⑱ STATION CALL (Random 30 ch.) buttons

These buttons are used to recall preset broadcast stations.
Using the GUI (Graphic User Interface) function lets you preset broadcast stations with on-screen display indications. FM MPX mode (AUTO/MONO) presets can be set at the same time.

NOTE:
Pressing a STATION CALL button when a component other than TUNER is selected causes the input selector setting to switch to TUNER.

⑲ RETURN button

Press this button to return the receiver into the initial state, TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME control.

- TAPE 2 MONITOR ..... OFF
- SPEAKERS A ..... ON
- MUTING ..... OFF
- SYSTEM ..... STEREO
- INPUT SELECTOR ..... TUNER
- STATION CALL ..... The last received FM broadcast station.*

* When a station is not received, station search will automatically proceed from the frequency displayed.

⑳ INPUT ATT button

Use this when there is distortion due to an excessively high input signal level. When this is switched ON, −10 dB attenuator operates, and the INPUT ATT indicator in the display section lights.

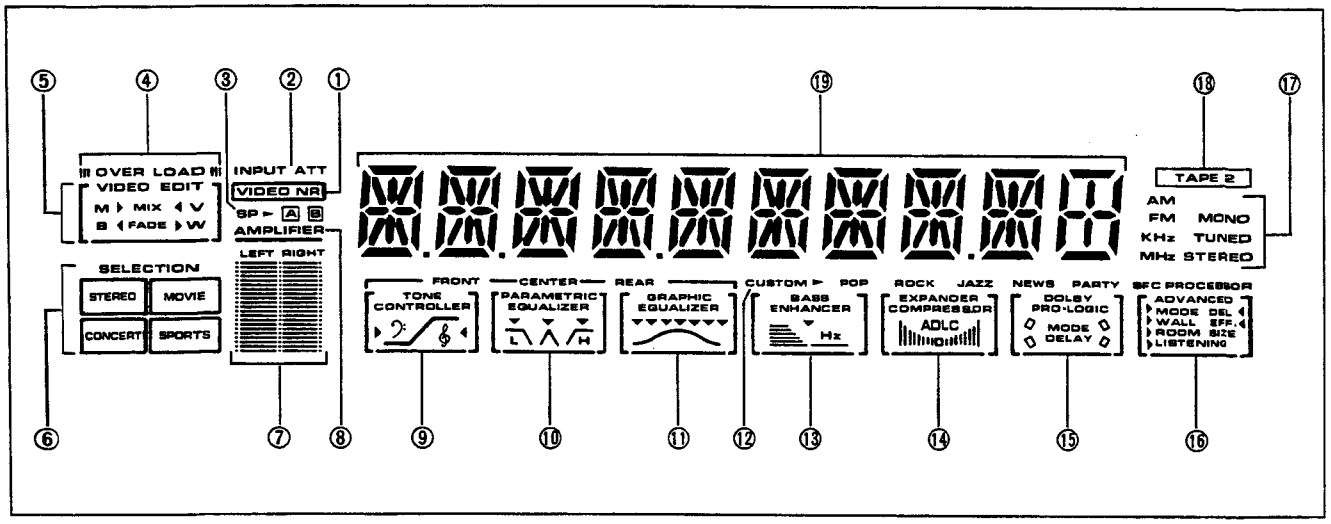
NOTE:
This button does not operate when the DIRECT button is in the on position.

㉑ DEMO button

The demonstration is activated by pressing the DEMO button while the power of the unit is ON. The demonstration mode is automatically canceled when the demonstration ends. Press any other button to cancel.

㉒ Remote sensor window

DISPLAY SECTION



① VIDEO NR indicator

Lights when the video noise reduction circuitry is switched ON.

② INPUT ATT indicator

Lights when the input attenuator circuitry is switched ON.

③ SP ▷ [A] [B] indicators

[A] : Lights when FRONT SPEAKERS A are ON.
[B] : Lights when FRONT SPEAKERS B are ON.

④ OVERLOAD indicator

Lights when the input signal level is excessive.

⑤ VIDEO EDIT indicators

When the VIDEO EDIT mode is selected, the bottom line lights. When ◁ is indicated on the left side of the "FADE" display, images fade in from black and fade out to black. When ▷ is indicated on the right side of the display, images fade in from white and fade out to white. When fading in or out, "VIDEO EDIT" and the bottom line, and ◁ or ▷ flash, indicating that video editing is in progress. During mixing level setting, ▷ and ◁ by the sides of "MIX" flash, indicating that mixing is in progress.

⑥ SELECTION indicators

Displays preset system names recalled with the SELECTION button. Each time the SELECTION button is pressed, the display changes as follows.

STEREO → MOVIE → CONCERT → SPORTS

⑦ Level indicators

Indicate input signal levels.

⑧ AMPLIFIER indicator

When AMPLIFIER is selected with PARAMETER CONTROL, this flashes to indicate that balance adjustment and TEST TONE operation are possible.

⑨ TONE CONTROLLER indicators

If TONE CONTROLLER is included in the selected system, the bottom line lights. At this time, the channels that can be controlled (FRONT, CENTER, REAR) light in the top display.
When you select TONE CONTROLLER with PARAMETER CONTROL, the bottom line flashes, indicating that tone control operation is possible.
Pertinent indications during operation flash (e.g. FRONT BASS + operation, "FRONT", "TONE CONTROLLER", and ▷ flash).

⑩ PARAMETRIC EQUALIZER indicators

If the selected system includes PARAMETRIC EQUALIZER, the bottom line lights. At this time, the channels that can be equalized (FRONT, CENTER) light in the top display.
When you select PARAMETRIC EQUALIZER with PARAMETER CONTROL, the bottom line flashes, indicating that parametric equalizer operation is possible. Pertinent indications light during operation.

⑪ GRAPHIC EQUALIZER indicators

If the selected system includes GRAPHIC EQUALIZER, the bottom line lights. At this time, the channels that can be equalized (FRONT, CENTER) light in the top display.
When you select GRAPHIC EQUALIZER with PARAMETER CONTROL, the bottom line flashes, indicating that graphic equalizer operation is possible. Pertinent indications light during operation.

⑫ CUSTOM indicators

Indicate the selection made from tuner section custom memory (POP, ROCK, JAZZ, NEWS, PARTY).

⑬ BASS ENHANCER indicators

If the selected system includes BASS ENHANCER, the bottom line lights.
When you select BASS ENHANCER with PARAMETER CONTROL, the bottom line flashes, indicating that bass enhancer operation is possible. "BASS ENHANCER" and "▽" flash during operation.

⑭ EXPANDER/COMPRESSOR indicators

If the selected system includes EXPANDER/COMPRESSOR, the bottom line lights.
When you select EXPANDER/COMPRESSOR with PARAMETER CONTROL, the bottom line flashes, indicating that expander/compressor operation and ADLC (Automatic Digital Level Control) operation are possible. Pertinent indications light during operation.

⑮ DOLBY surround indicators

If the selected system includes the PRO LOGIC PROCESSOR, the bottom line lights.
During DOLBY 3CH LOGIC operation, "PRO LOGIC" does not light.
When you select PRO LOGIC PROCESSOR with PARAMETER CONTROL, the bottom line flashes, indicating that DOLBY surround operation is possible. When operation starts, pertinent indications light.

⑯ SFC PROCESSOR indicators

If the selected system includes ADVANCED S.F.C. or BASIC S.F.C., the bottom line lights.
During BASIC S.F.C. operation, "ADVANCED" does not light. Pertinent indications light during operation.

⑰ Tuner indications

AM, kHz : During AM band reception, this lights when the frequency is indicated in the character display ⑲.
FM, MHz : During FM band reception, this lights when the frequency is indicated in the character display ⑲.
MONO : Lights when the FM MPX mode is MONO.
TUNED : Lights when a broadcast station is tuned into. However, it does not light if reception is extremely weak.
STEREO : Lights when a stereo broadcast is received in the stereo mode.

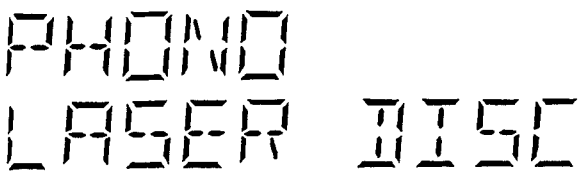
⑱ TAPE 2 indicator

Lights when the TAPE 2 MONITOR is switched ON.

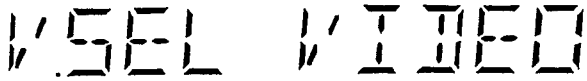
⑲ Character display

Offers multiple displays including input selector positions, reception frequencies, and various parameters. Here are some examples of displays.

● **INPUT SELECTOR**

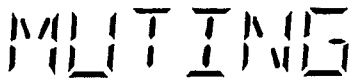


● **VIDEO SIGNAL SELECTOR**

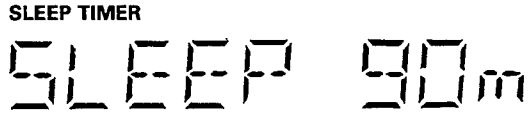


● **TUNER**

● **MUTE ON**



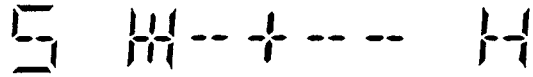
● **SLEEP TIMER**



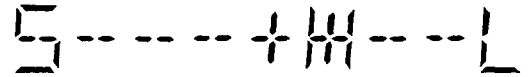
● **S.F.C.**

■ INITIAL DELAY

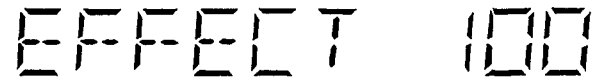
■ WALL TYPE



■ ROOM SIZE

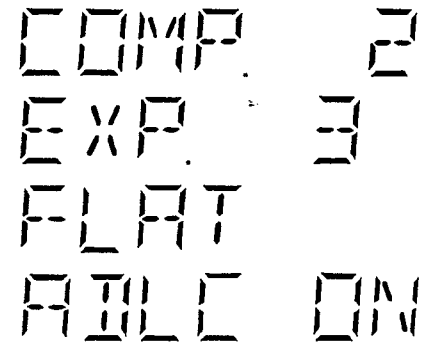


■ EFFECT

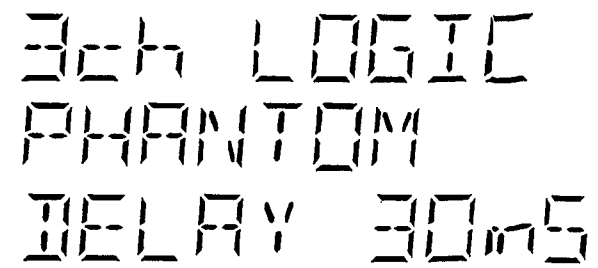


■ S.F.C. MODE

● **EXPANDER/COMPRESSOR**



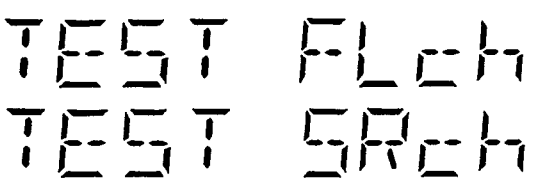
● **PRO LOGIC**



● **BASS ENHANCER**

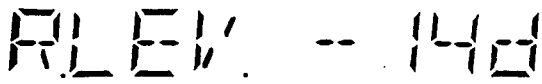
● **AMPLIFIER**

■ TEST TONE



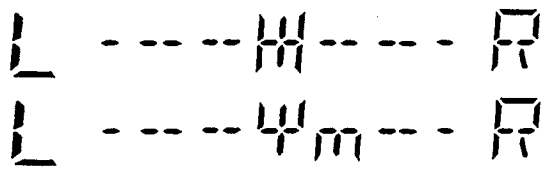
■ DSSS

■ REAR LEVEL



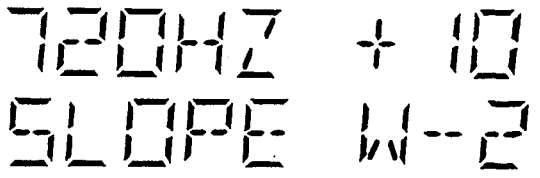
■ CENTER LEVEL

■ BALANCE

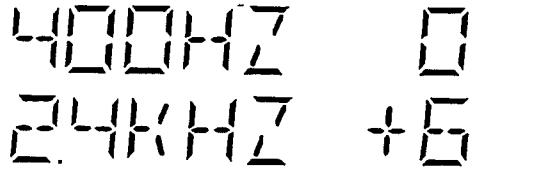


● **TONE CONTROLLER**

● **PARAMETRIC EQUALIZER**

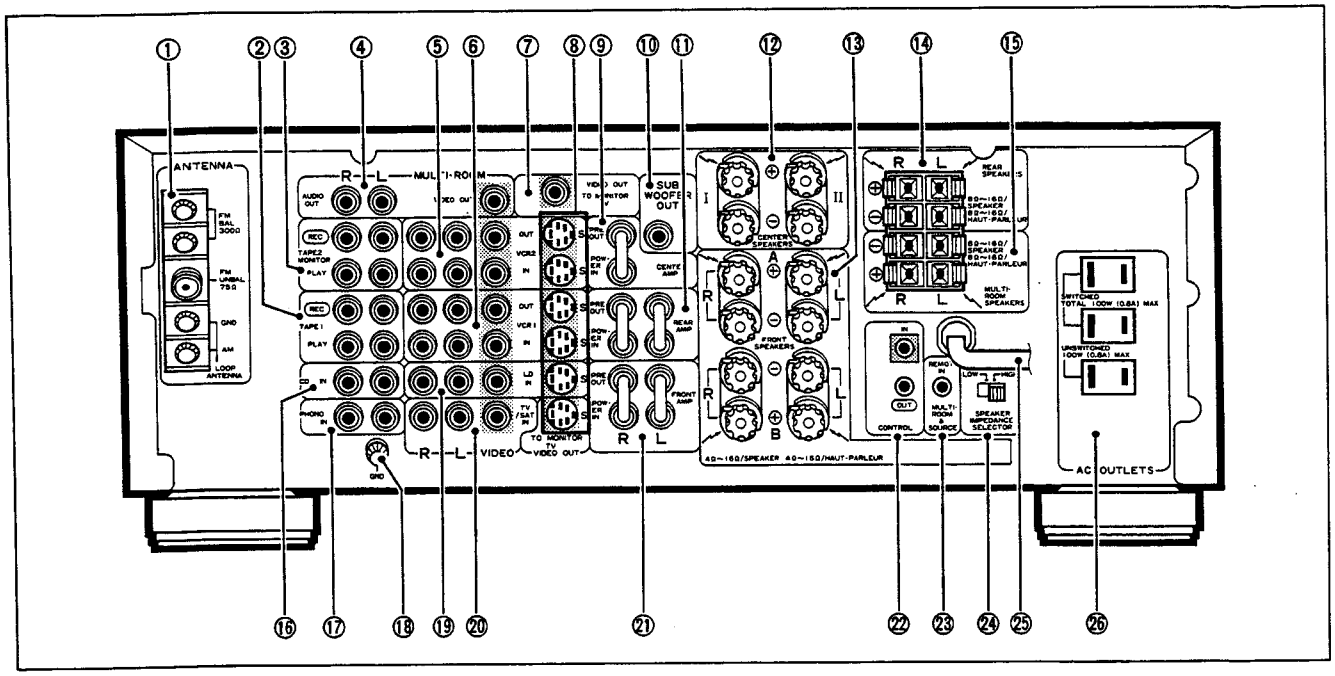


● **GRAPHIC EQUALIZER**



REAR PANEL FACILITIES

* Illustration shows U.S. and Canadian models.



① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts by attaching the accessory AM loop and FM T-type antennas.

- For details regarding antenna connection, see the section "HINTS FOR BETTER RECEPTION" on page 21.

② TAPE 1 jacks

Connect a cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 1 jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 1 jack on the receiver with a pin plug connecting cord.

③ TAPE 2 MONITOR jacks

Connect a second cassette deck to these jacks.

Connection for Recording

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

Connection for Playback

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

④ MULTI-ROOM jacks

Connect here to enjoy a sub function during MULTI-ROOM & SOURCE operation.

[VIDEO OUT]

Connect the monitor TV for use in the Sub room.

[AUDIO OUT]

When operating MULTI-ROOM & SOURCE with surround in the Main room, use this jack for sound in the Sub room.

Refer to pages 18 and 19 for details concerning connections.

⑤ VCR 2 jacks

[VIDEO IN]

Connect to the VCR 2 VIDEO OUTPUT jack.

[AUDIO IN (L, R)]

Connect to the VCR 2 AUDIO OUTPUT jacks.

[VIDEO OUT]

Connect to the VCR 2 VIDEO INPUT jack.

[AUDIO OUT (L, R)]

Connect to the VCR 2 AUDIO INPUT jacks.

⑥ VCR 1 jacks

[VIDEO IN]

Connect to the VCR 1 VIDEO OUTPUT jack.

[AUDIO IN (L, R)]

Connect to the VCR 1 AUDIO OUTPUT jacks.

[VIDEO OUT]

Connect to the VCR 1 VIDEO INPUT jack.

[AUDIO OUT (L, R)]

Connect to the VCR 1 AUDIO INPUT jacks.

⑦ VIDEO OUT TO MONITOR TV jack (output)

Use this jack to connect a TV monitor or a TV set with video input terminals for watching program materials from a VCR or Video disc player (LD player) and for GUI operations.

⑧ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (LD player) or TV monitor equipped with S video jacks, connect to these jacks. (See page 8)

⑨ CENTER AMP jacks

[PRE-OUT]
When a separate power amplifier is used to drive the surround center speaker, connect the power amplifier to this jack.
[POWER IN]
When a separate preamplifier is used for a center speaker and this unit is used as a power amplifier, connect the preamplifier to this jack.

⑩ SUB WOOFER OUT jack

If you want to boost the low frequencies, or want to use the unit in a 3D system, connect to a sub woofer power amplifier.

⑪ REAR AMP jacks

[PRE OUT]
When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate preamplifier is used for rear speakers and this unit is used as a power amplifier, connect the preamplifier to these jacks.

⑫ CENTER SPEAKER terminals

Connecting the surround center channel speaker system(s).
You can connect two speakers for dual center, so you can locate speakers on both sides of the TV.
Speaker impedance:
Refer to ㉔ SPEAKER IMPEDANCE SELECTOR switch.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑬ FRONT SPEAKERS terminals

A: Connect to the first set of speakers.
B: Connect to a second set of speakers.
Speaker impedance:
Refer to ㉔ SPEAKER IMPEDANCE SELECTOR switch.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑭ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.
Speaker impedance
Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑮ MULTI-ROOM SPEAKERS terminals

Connect to the Multi-room speakers.
Speaker impedance
Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑯ CD IN jacks

Connect to compact disc player.

⑰ PHONO IN jacks

Connect to turntable.

⑱ GND terminal

Connect the turntable ground lead to this terminal.

⑲ LD jacks (input)

[VIDEO IN]
When watching the video image from an LD player or a VCR used for playback, connect its VIDEO OUTPUT jack here.
[AUDIO IN (L,R)]
When playing back the audio channel from an LD player (CD CDV LD player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑳ TV/SAT jacks (input)

Use these jacks if you wish to connect a TV tuner with both video and audio outputs.
[VIDEO IN]
Connect the TV tuner's VIDEO OUTPUT to this jack.
[AUDIO IN (L, R)]
Connect the TV tuner's AUDIO OUTPUT to these jacks.

㉑ FRONT AMP jacks

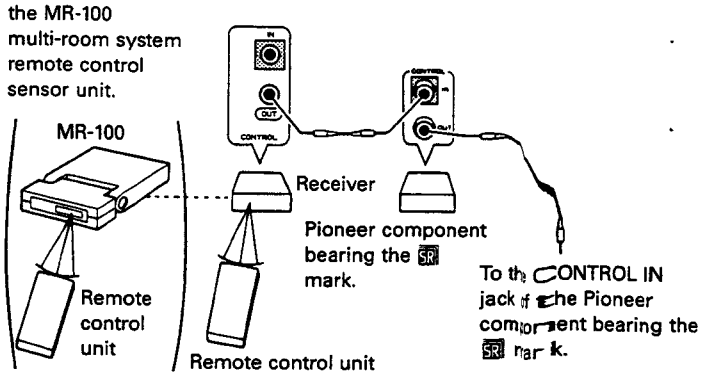
[PRE-OUT]
When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate preamplifier is connected and this unit is used as a power amplifier, connect the preamplifier to these jacks.

㉒ CONTROL IN, OUT jacks

Used for system control with other Pioneer components bearing the SR mark.
IN : For connection from the CONTROL OUT jack of another component (TV, etc.).
OUT : For connection to the CONTROL IN jack of another component.

NOTE:
The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.

When using the MR-100 multi-room system remote control sensor unit.


MR-100
Receiver
Pioneer component bearing the SR mark.
To the CONTROL IN jack of the Pioneer component bearing the SR mark.
Remote control unit
Remote control unit

㉓ MULTI-ROOM & SOURCE REMOTE IN jack

When using the MULTI-ROOM & SOURCE function, connect to the separately sold MR-100 Multi-Room remote control unit. (See pages 18, 19)

㉔ SPEAKER IMPEDANCE SELECTOR switch

Set this switch to match the nominal impedance of your front and center speakers.

• Position HIGH:

Front speakers	Center speaker(s)
A or B (1 pair); 8 Ω	4 Ω to 16 Ω (DUAL; 8 Ω to 16 Ω)
A and B (2 pairs); 16 Ω	

• Position LOW:

Front speakers	Center speaker(s)
A or B (1 pair); 8 Ω	4 Ω to 16 Ω (DUAL; 8 Ω to 16 Ω)
A or B (1 pair); 4 Ω	8 Ω to 16 Ω (DUAL; 16 Ω)
A and B (2 pairs); 8 Ω	

NOTE:

Turn off the receiver's power before changing the impedance selector switch setting.

㉕ AC Power cord

Connect to AC wall socket.

NOTE:

This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.

㉖ AC OUTLETS

[U.S. and Canadian models]

SWITCHED TOTAL 100 W (0.8 A) MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).

UNSWITCHED 100 W (0.8 A) MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W (0.8 A).

[Multi-voltage model]

SWITCHED TOTAL 100 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

UNSWITCHED 100 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTE:

Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.

This can cause the receiver to malfunction.

CAUTION:
DO NOT CONNECT MONITOR OR TV SET.

SELECTING SYSTEM

Besides basic functions, this unit features ten built-in add-on component functions. You can select a maximum of four of these functions to create your own original system, and register four of your system combinations (A to D) for recall later with a SYSTEM SELECTOR button.
Using the GUI (Graphic User Interface) function enables system design with on-screen display (TV). (See pages 54 and 55).
As well as the four systems you can create yourself, there are four factory preset systems you can call up in sequence with the SELECTION button.

[Preset systems]

STEREO : AMPLIFIER + GRAPHIC EQUALIZER + EXPANDER/COMPRESSOR

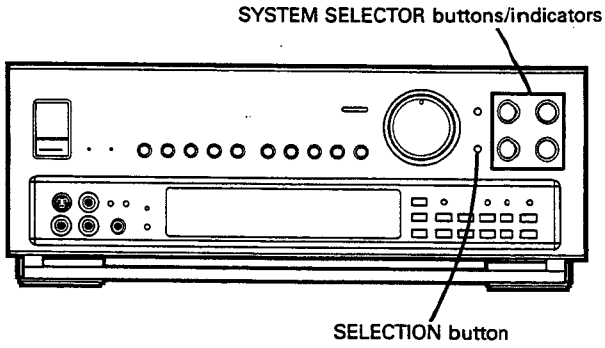
MOVIE : AMPLIFIER + PRO LOGIC PROCESSOR + BASIC SFC (MOVIE) + TONE CONTROLLER + BASS ENHANCER

CONCERT : AMPLIFIER + BASIC SFC (CONCERT) + GRAPHIC EQUALIZER + BASS ENHANCER

SPORTS : AMPLIFIER + BASIC SFC (SPORTS) + PARAMETRIC EQUALIZER + EXPANDER/COMPRESSOR + BASS ENHANCER

NOTE:

- *When no systems are registered, pressing a SYSTEM SELECTOR has no effect. (The system is AMPLIFIER only.)*
- *Switch parameters (sound quality etc.) using GUI (Graphic User Interface). You can memorize the parameter settings for each of the 8 SYSTEMS.*
- *The volume setting (volume knob position) is memorized for each of the eight systems, so when a system is selected, the volume returns to the previous level setting.*



OPERATING TUNER

Press the POWER switch to the ON position.
Select TUNER with the input selector.
Be sure to turn the TAPE 2 MONITOR button OFF when listening to FM or AM broadcasts.

- Broadcast reception is not possible unless an antenna is connected, so be sure to connect one.

MANUAL/AUTO TUNING INTO STATIONS

1. **Use the FM/AM button to select either FM or AM.**
2. **Press TUNING + button for higher frequencies or TUNING − button for lower frequencies.**
   The TUNED indicator lights up when a station of sufficient signal strength is tuned in.

• One Step Tuning:
Press + or − button and release quickly. The frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station.

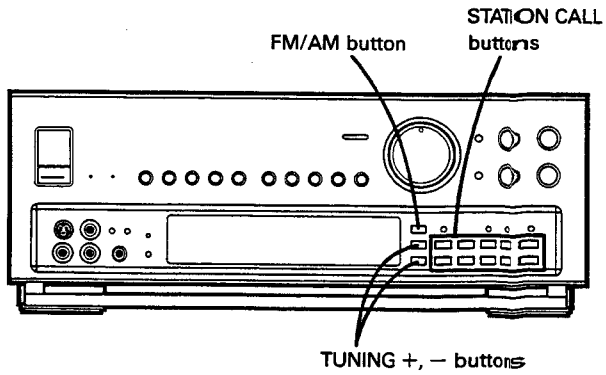
• Auto Tuning:
Press + or − button until the frequency starts to change (about 1 sec.), then release it. The tuner automatically searches for a broadcasting station and stops when one is found, and the TUNED indicator lights up.
To search for another station, press again.

NOTE:
When the signal level is too weak for reception, the unit cannot perform Auto tuning. In this case, change to Manual tuning.

• High Speed Manual Tuning:
Keep + or − button pressed. The frequency changes continuously, and stops when the button is released.

Last station memory

When the POWER switch is pressed to turn power on, the last station received before the power was turned off will be tuned in again. When the power is ON, if the FM/AM button is pressed, the last station received on that band will be tuned in again.



DIRECT ACCESS TUNING

When you know the frequency of the desired station, the frequency can be input directly. But this method cannot be performed without GUI (Graphical User Interface) function (see page 46).

PRESET TUNING

Using the GUI (Graphic User Interface) function, you can preset up to 30 FM/AM stations (see page 47) When presetting, you can divide stations into five different genres (ROCK, POP, JAZZ, NEWS, PARTY). (Custom Memory)
Once stations have been preset with GUI, reception of a desired station is possible simply by pressing the appropriate STATION CALL button.

Listen to Broadcasts Using Preset Tuning

Press the STATION CALL button into which the desired station has been preset.

- Use the STATION CALL buttons (*1 — *9, *0) to select a STATION CH. Press once selects the 1 — 10 range, press twice 11 — 20 and press three times 21 — 30.

Memory Scan (Short-time reception of consecutive stations)

Reception of consecutive broadcast stations memorized in STATION CALL buttons (each station is received for about five seconds).
You can scan all stations, or just the stations memorized in the custom memory.

[Scanning all the stations memorized in the STATION CALL buttons]

During TUNER display, press the SCAN button on the remote control unit.

[Scanning the genres in the custom memory]

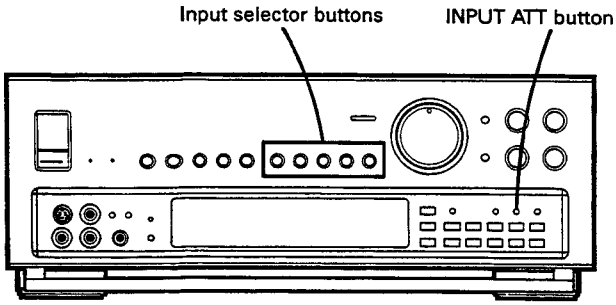
1. **Display the desired genre using the CUSTOM button on the remote control unit.**
2. **Press the SCAN button on the remote control unit.**

Following functions cannot be performed without GUI (Graphic User Interface) function.

- DIRECT ACCESS TUNING (see page 46)
- PRESET TUNING (see page 47)
- NAMING A STATION (see page 49)

OPERATING THE AUDIO COMPONENTS

Press the POWER switch to the ON position, and turn on the power to the other audio components you wish to use.



PLAYBACK

1. **Use the input selector buttons to select the desired audio program source.**

Program source	Input selector
To listen to a tape on the cassette deck connected to TAPE 1 jack	TAPE 1
To listen to a tape on the cassette deck connected to TAPE 2 jacks	TAPE 2 MONITOR*
To listen to records	PHONO
To listen to compact discs	CD

* If you select a music source other than TAPE 2, switch off the TAPE 2 MONITOR.

2. **Operate the appropriate audio component to play back the program source.**
3. **Adjust the volume as desired.**

- Sound quality adjustments cannot be performed unless GUI is used (see pages 56 to 61).
- If you recall a system that already includes SFC processor with the SELECTION button or with a SYSTEM SELECTOR button, playback with SFC is possible.
- When there is distortion due to an excessively high input level, switch INPUT ATT ON.
  When switched ON, the INPUT ATT indicator in the display section lights.

RECORDING

You can record sound from TUNER, CD, and PHONO on TAPE 1, or TAPE 2 cassette decks.

RECORDING WITH TAPE 1

1. **Select the source you want to record from (TUNER, CD, or PHONO) with the input selector buttons.**
2. **Load the TAPE 1 cassette deck with a tape for recording.**
3. **Start recording on the TAPE 1 cassette deck.**
4. **Start playback on the component selected with the input selector buttons.**

RECORDING WITH TAPE 2

The source selected by the input selector buttons can be recorded.

1. **Select the source you want to record from (TUNER, CD, or PHONO) with the input selector buttons.**
   - Be sure that the TAPE 2 MONITOR button is OFF.
2. **Load the TAPE 2 cassette deck with a tape for recording.**
3. **Start recording on the TAPE 2 cassette deck.**
4. **Start playback on the source selected with the input selector buttons.**

USING VCR 1, VCR 2 FOR AUDIO RECORDING

The audio signal output from the VCR 1 and VCR 2 AUDIO REC jacks is the same as that output from the TAPE 1 REC jacks, so you can record using the same procedures as for recording with TAPE 1.

COPYING TAPES

The following operations concern TAPE 1 to TAPE 2 copying.

1. **Press the TAPE 1 input selector button.**
   - If the TAPE 2 MONITOR button is ON, press to turn it OFF.
2. **Load the TAPE 1 cassette deck with a tape to play back.**
3. **Load the TAPE 2 cassette deck with a tape to record to.**
4. **Start recording on the TAPE 2 cassette deck.**
5. **Start playback on the TAPE 1 cassette deck.**

The following operations concern TAPE 2 to TAPE 1 copying.

1. **Select a source other than TAPE 1 with the input selector buttons.**
2. **Press the TAPE 2 MONITOR button to turn it ON.**
3. **Load the TAPE 2 cassette deck with a tape to play back.**
4. **Load the TAPE 1 cassette deck with a tape to record to.**
5. **Start recording on the TAPE 1 cassette deck.**
6. **Start playback on the TAPE 2 cassette deck.**

Tape monitoring

When recording is performed on a cassette deck equipped with monitoring function, the recorded sound can be monitored through the speaker system by pressing the TAPE 2 MONITOR button to ON.

OPERATING THE VIDEO COMPONENTS

Press the POWER switch to the ON position, and turn on the power to the other video components you wish to use.

PLAYBACK

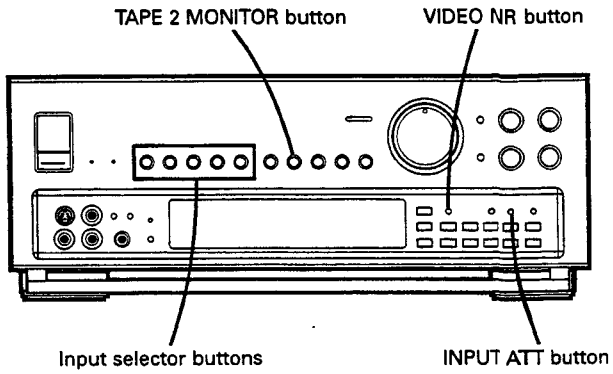
1. **Use the input selector buttons to select the desired video program source.**

Program source	Input selector
To watch a video cassette tape on the VCR connected to VCR 1 jacks	VCR 1
To watch a video cassette tape on the VCR connected to VCR 2 jacks	VCR 2
To watch a video cassette tape on the VCR or TV camera, etc., connected to front panel VIDEO INPUT jacks	VIDEO
To watch a TV program (reception with a TV tuner connected to TV/SAT IN jacks)	TV/SAT
To watch a video disc on an LD player or CD CDV LD player connected to LD IN jacks	LD

* If the TAPE 2 MONITOR button is ON, press to turn it to OFF.

2. **Operate the appropriate video component to play back the program source.**
3. **Adjust the volume as desired.**

- When there is a lot of picture noise interference, you can reduce it by pressing the VIDEO NR button ON. However, when reception conditions are extremely poor, or when playing back a badly recorded video cassette tape, noise reduction may not be entirely effective.
  When switched ON, the VIDEO NR indicator in the display section lights.
- Sound quality adjustments cannot be performed unless GUI is used (see pages 56 to 61).
- If you recall a system that already includes SFC processor with the SELECTION button or with a SYSTEM SELECTOR button, playback with SFC is possible.
- There are editing functions for the front panel VIDEO INPUT jacks (sound mixing function for mixing with other sources, and AV fader function). Operate these functions using GUI (see page 52).
- When there is distortion due to an excessively high input level, switch INPUT ATT ON.
  When switched ON, the INPUT ATT indicator in the display section lights.



VIDEO RECORDING

You can record audio and video from LD, TV/SAT, VIDEO, on VCR 1 and VCR 2.

- There are editing functions for the front panel VIDEO INPUT jacks (sound mixing function for mixing with other sources, and AV fader function). Operate these functions using GUI (see page 52).

1. **Select the source you want to record from (LD, TV/SAT, VIDEO), with the input selector button.**
2. **Load the VCR 1 (or VCR 2) with a tape for recording.**
3. **Start recording on VCR 1 (or VCR 2).**
   - For VCR 1 or VCR 2, select a line input (external input).
4. **Start playback on the component selected with the input selector buttons.**

COPYING VIDEO TAPES

The procedures for copying from VCR 1 to VCR 2, and from VCR 2 to VCR 1, are the same as previously mentioned. Select the component for playback with the input selector buttons.

USING MULTI-ROOM AND SOURCE (MR & S)

Refer to pages 18 and 19 for details concerning connections.

By incorporating the separately sold MR-100 Multi-Room System remote control sensor unit, you can enjoy playing two sources at the same time.
When using a rear channel amplifier in the main room, there is no output from the MULTI-ROOM SPEAKERS terminals. In this case, connect an external amplifier to the MULTI-ROOM AUDIO OUT jacks.

Remote control operation in Sub room

(With Sub room, only remote control operation is possible.)

1. The following remote control button can be used to operate the receiver in Sub room.
   - RECEIVER POWER button.
   - RETURN button.
   - Input selector buttons except VIDEO and TAPE 2 MONITOR.
   - MASTER VOLUME (+, −) buttons: These adjust Sub room volume level.
   - TUNER station call 1-0/10 buttons: The function automatically switches to TUNER.
   - MUTING button: When muting is turned on and then turned off.
   - SLEEP button.
2. If you connect to the CONTROL jacks of other components, bearing the SR mark, such as a CD player or cassette deck, remote control of these components is also possible.
3. If light from strong fluorescent lamps falls on the MR-100 remote sensor window, remote control operation may not be possible.

For example

When enjoying playback on VCR 1 on speakers and the TV monitor installed in Main room, you can enjoy a LaserDisc on speakers and MULTI-ROOM TV monitor in Sub room.

[Setting MULTI-ROOM & SOURCE Sub Function]

1. **Select LD with the input selector buttons.**
2. **Turn the MULTI-ROOM & SOURCE OFF/ON button ON.**
   - The MULTI-ROOM indicator lights.
   - When MULTI-ROOM & SOURCE is ON, the Sub function at that time is the same as that set with the input selector.
     After switching MULTI-ROOM & SOURCE ON, the SUB FUNCTION cannot be switched on the receiver. Switch it from Sub room with the remote control unit.

[Setting MULTI-ROOM & SOURCE Main Functions]

3. **Select VCR 1 with the input selector buttons.**
4. **Start playback of VCR 1 and the LD player.**
5. **For Main room, adjust volume level with the receiver's MASTER VOLUME control.**
   For Sub room, point the remote control at the MR-100 and adjust the volume level with the MASTER VOLUME buttons.

In Sub room, when you do not know the present volume level or Sub Function of the receiver, press the RETURN button. The Sub Function becomes TUNER, and you will hear the last received FM broadcast station. The volume level will be that initially set on the receiver. You can then select your desired Sub Function, and adjust volume to the desired level.

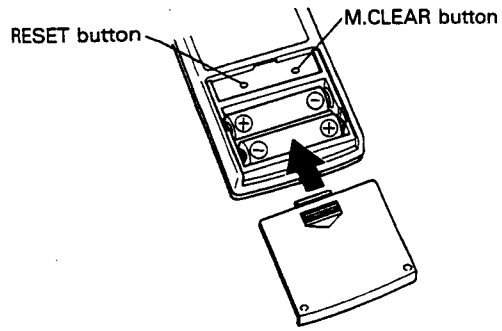
Precautions concerning MULTI-ROOM & SOURCE

- In Sub room, if you use the remote control to switch RECEIVER POWER off (standby), power to the receiver itself is cut, so be careful when recording or copying tapes in Main room.
- Remember that if you operate the tuner section in Sub room and change the station when you are recording a radio broadcast in Main room, the station you changed to will be recorded.
- Each time you switch MULTI-ROOM & SOURCE ON, volume in Sub room will be set to the previous setting.
- MULTI-ROOM & SOURCE can only be switched ON/OFF with the switch on the receiver itself. Set the Sub Function in Main room, switch MULTI-ROOM & SOURCE ON, and move to Sub room. Volume levels in Main room and Sub room are independent.
- In Main room and Sub room, when a remote control signal is transmitted at the same time, the receiver does not operate.
- As the remote control for the Sub room, use the CU-AV70, CU-AV100, or CU-AV200. In this case, first have that remote control memorize the RETURN button command from the receiver's remote control before use.
- When operating MULTI-ROOM & SOURCE with the MULTI-ROOM AUDIO OUT jacks connected to the Sub room amplifier, if the amplifier bears the Pioneer SR mark and has a remote sensor, both the MR-100 and the amplifier may receive remote control commands, making correct operation impossible. Place the MR-100 and amplifier apart from each other, and point the remote control directly at the MR-100 to operate.

REMOTE CONTROL UNIT

LOADING BATTERIES

1. **Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.**
2. **Take out the two supplied size "AA" alkaline batteries (LR6/AM-3), and insert them into the battery compartment in accordance with the indications in the compartment.**
3. **Press the RESET button.**
4. **Close the cover of the battery compartment.**



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

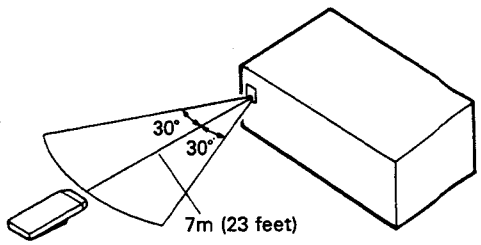
A.
Always insert batteries into the battery compartment correctly matching the positive + and negative − polarities, as indicated inside the compartment.

B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different types of batteries.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.
Performance of the remote control unit is adversely affected by strong fluorescent light. Keep such lights away, especially from the sensor window.



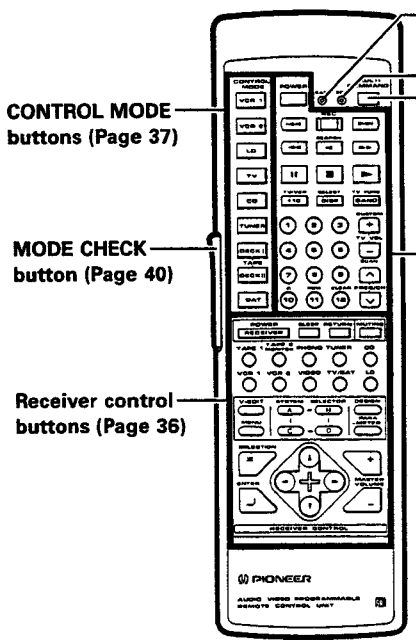
Battery Replacement

When the batteries have run out, the CONTROL MODE buttons will not light properly. If left like this, programs will be erased, so be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately.
Also, be sure to always use the specified batteries [size "AA" (LR6/AM-3) alkaline batteries].

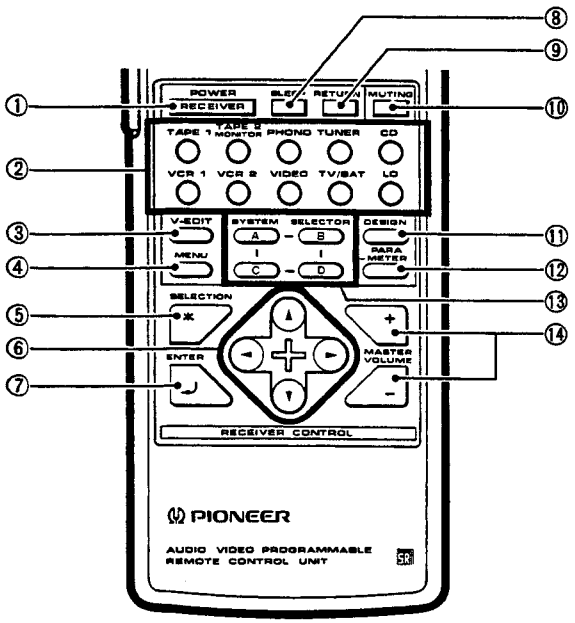
NOTE:
When no batteries are inserted, the programmed memory contents will be erased after about 30 minutes.
When you want to clear the Programmed memory, refer to page 43.
The memory cannot be cleared simply by removing the batteries.

OUTLINE OF BUTTON LAYOUT

- The buttons on the lower half of the remote control command receiver functions.
- Buttons on the upper half are used to operate other components.
- Operation buttons for other components can learn the command signals of other remote control units.
- There are 12 kinds of preset signals for operation of VCR 1, VCR 2, and TV. Select and use one of them.
- A maximum of seven commands can be programmed into the MULTI COMMAND button, enabling transmission of a sequence of commands at the push of a button.


LEARN button (Page 41)
EDIT button (Page 42)
CONTROL MODE buttons (Page 37)
MULTI COMMAND button (Page 42)
MODE CHECK button (Page 40)
Operation buttons (Page 37)
These buttons can be programmed with commands of other remote control units. (Page 41)
Receiver control buttons (Page 36)

RECEIVER CONTROL BUTTONS



① RECEIVER POWER button
Switches the receiver power between ON and STANDBY.

② Input selector buttons
Press when switching the receiver's input selector.
The CONTROL MODE also switches to the same component (except VIDEO and PHONO). (One CONTROL MODE button lights.)
Pressing TAPE 1, TAPE 2 MONITOR, causes the CONTROL MODE DECK II button to light.

③ V-EDIT button (GUI operation)
Press when the input selector is set to VIDEO, and Edit operation indications are displayed at the top of the TV screen. While this display is shown, you can use GUI functions for sound mixing and AV fader operation.
Press once more, and the Edit operation display clears, indicating that the Edit function is switched OFF.

④ MENU button (GUI operation)
Press to get on-screen display of the operation menu for the component selected with the input selector. When this display is shown, you can use the GUI function to operate the component. (Operation of a component other than those in this unit's built-in tuner section is only possible if it is connected to this unit by a control cord.)
To switch off the display, press this button once more, or select "CLOSE!" in the Menu, and press the ENTER button.

⑤ SELECTION button
This recalls in sequence the four factory preset system configurations provided for first-time users.

STEREO → MOVIE → CONCERT → SPORTS →

STEREO : AMPLIFIER + GRAPHIC EQUALIZER + EXPANDER/COMPRESSOR
MOVIE : AMPLIFIER + PRO LOGIC PROCESSOR + BASIC SFC (MOVIE) + TONE CONTROLLER + BASS ENHANCER
CONCERT : AMPLIFIER + BASIC SFC (CONCERT) + GRAPHIC EQUALIZER + BASS ENHANCER
SPORTS : AMPLIFIER + BASIC SFC (SPORTS) + PARAMETRIC EQUALIZER + EXPANDER/COMPRESSOR + BASS ENHANCER

Use the GUI (Graphic User Interface) function to adjust parameters of each add-on component function with on-screen indications.

⑥ Select/Adjust buttons (◁, ▷, △, ▽) (GUI operation)
When using the GUI function with on-screen display, use for such operations as selection and adjustments (by moving the cursor).

⑦ ENTER button (GUI operation)
Press to execute an operation selected with the Select/Adjust buttons ⑥.

⑧ SLEEP timer button
Activates the SLEEP timer. During SLEEP timer operation, the "dimmer" function decreases the brightness of the display section. The duration changes in the following manner each time the button is pressed:

→ 120 → 90 → 60 → 30 → 0 (Off) →

Unit: minutes

⑨ RETURN button
Press this RETURN button to return the receiver into the initial state. TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME control.

⑩ MUTING button
Use to temporarily mute the sound.
The volume is restored when pressed again.

⑪ DESIGN button (GUI operation)
Press to get a Design display for creating systems with and this unit's built-in add-on component functions. This Design display indicates the add-on component functions selected to create the system configurations registered in SYSTEM SELECTOR buttons A, B, C, or D. When a preset system is selected with the SELECTION button, pressing the DESIGN button displays the components in the system. To switch off the Design display, press this button once more, or select "CANCEL" in the Menu, and press the ENTER button.

⑫ PARAMETER button (GUI operation)
When selecting systems registered in SYSTEM SELECTOR buttons A, B, C, or D, or those preset in the SELECTION button, press this button to get the display for selection of the system add-on component functions you want to operate.
To switch off the selection display, press this button once more, or select "CLOSE!" in the Menu, and press the ENTER button.

⑬ SYSTEM SELECTOR buttons (A, B, C, D)
Use to recall systems created by combining add-on component functions with the DESIGN function.

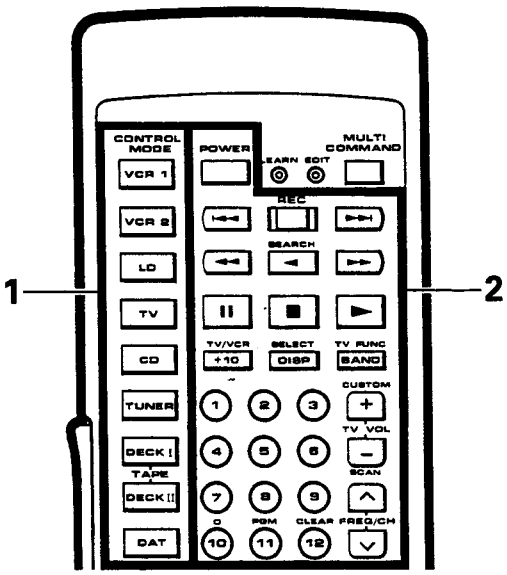
⑭ MASTER VOLUME buttons (+, −)
Use to adjust the overall volume level.

OPERATING OTHER COMPONENTS

This remote control unit can be used to operate some functions of Pioneer [SR] marked VCRs, LD players, TV sets, CD players, tuners, cassette decks, and digital audio tape decks.

REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIOVISUAL COMPONENTS VIA THIS UNIT REQUIRES:

1. All components must be remote controllable (have a sensor window on the front panel) to receive a direct command from this unit, and the programmable unit must successfully learn the desired commands or,
2. All units must have remote control jacks (IN/OUT) on the rear panel and be correctly connected to the receiver according to the diagram on page 28.

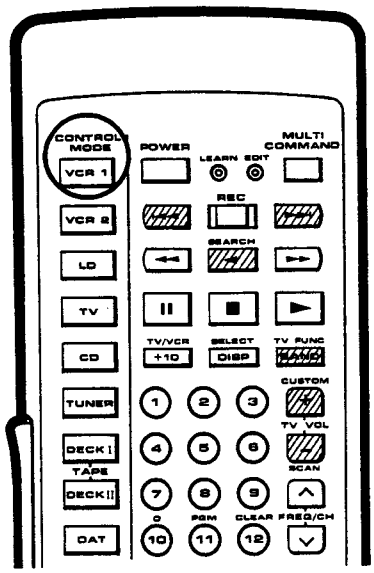


When operating components other than the receiver:

1. **Press the CONTROL MODE buttons for the component you want to operate.**
2. **Press the operation button.**

Shaded [▨] buttons do not operate in the selected CONTROL MODE.

VCR 1 operation



(With VCR 2, even if you press an operation button, no signal is output. Preset or program and use.)

POWER button:
Switches VCR power ON/OFF.

REC button:
Selects the recording mode.

◄◄ **(REW) button:**
Rewinds the tape and allows picture search.

►► **(FF) button:**
Rapidly advances the tape and allows picture search.

❚❚ **(PAUSE/STILL) button:**
Sets pause and still picture.

■ **(STOP) button:**
Stops tape transport.

► **(PLAY) button:**
Selects playback.

TV/VCR button:
This button can be used only for VCRs with a TV/VCR selector.
Toggles the antenna output between TV and VCR.

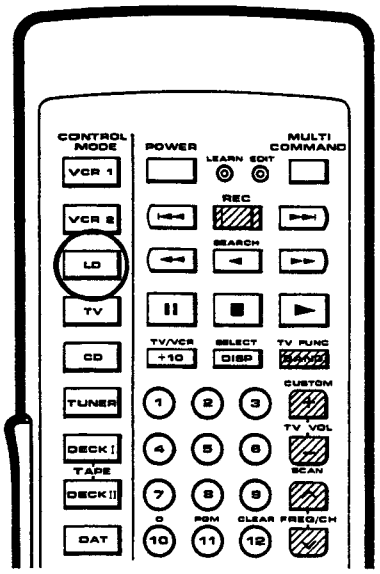
DISP (DISPLAY) button:
Switches TV screen display ON/OFF.

1—12 buttons:
Use to call up channels.

CH ∧ button:
Shifts channels in ascending order.

CH ∨ button:
Shifts channels in descending order.

Video disc player (LD player) operation



POWER button:
Switches VDP (LD player) power ON/OFF.

⏮ **(CHAPTER SKIP) button:**
Searches for the start of the chapter playing.

⏭ **(CHAPTER SKIP) button:**
Searches for the start of the next chapter.

SEARCH button:
Used for the search operation and for the memory repeat operation.

◄◄ **(SCAN) button:**
Selects fast backward.

►► **(SCAN) button:**
Selects fast forward.

❚❚ **(PAUSE) button:**
Video and audio are stopped and playback is paused.

■ **(STOP/EJECT) button:**
Playback is stopped when pressed once. Pressing again causes the disc table to come out.

► **(PLAY) button:**
Selects playback.

+10 button:
Use to input such information as chapter numbers higher than 10.

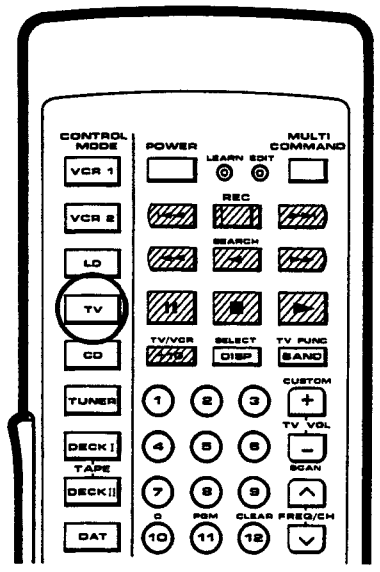
DISP (DISPLAY) button:
Switches TV screen display of chapter, frame/time number ON/OFF.

1—10 buttons:
Used for chapter and frame/time number search and for chapter program play.

PGM (PROGRAM) button:
Allows use of chapter program play.

CLEAR button:
Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.

TV operation



POWER button:
Switches the power of the TV ON/OFF.

DISP (DISPLAY) button:
TV super impose display ON/OFF.

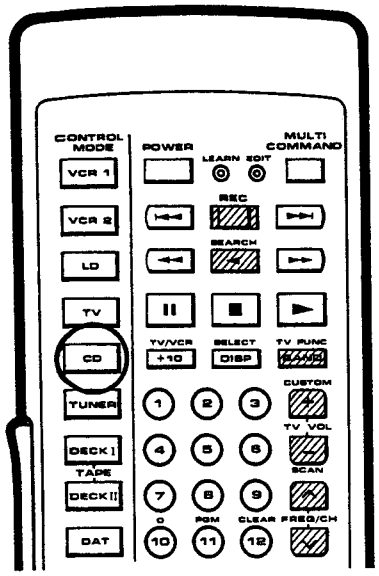
TV FUNC (TV FUNCTION) button:
Used to change the TV FUNCTION.
• The TV FUNC button cannot be used with some Pioneer TVs.

1—12 buttons:
Used to call up channels.

TV VOL (+, −) buttons:
Raises and lowers the volume.

CH (∧, ∨) buttons:
Changes the channel in the direction of larger (∧) and smaller (∨) channel numbers.

CD player operation



POWER button:
Switches CD player power ON/OFF.

⏮ **(TRACK SEARCH) button:**
Returns to the beginning of the track currently playing.

⏭ **(TRACK SEARCH) button:**
Advances to the next track.

◀◀ **(MANUAL SEARCH) button:**
Selects fast backward.

▶▶ **(MANUAL SEARCH) button:**
Selects fast forward.

⏸ **(PAUSE) button:**
Pauses playback.

■ **(STOP) button:**
Stops playback.

▶ **(PLAY) button:**
Selects playback.

+10 button:
Use when selecting a track number higher than 10. For example, to select 21, press the [+10] button twice and then the [1] button. This button cannot be used with some Pioneer CD players.

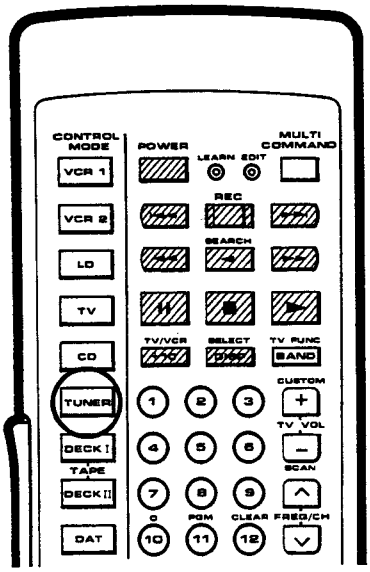
SELECT button:
Selects the DISC No. (1 to 6) for Multi-play CD players.

1—10 buttons:
For direct selection of a track or programming of tracks.

PGM (PROGRAM) button:
Press to program the CD player.

CLEAR button:
Erases a memorized program.

Tuner operation (The receiver/tuner section can also be operated in this position)



1—12 buttons:
For recall of tuner presets.
Buttons 1 to 10 are used for the receiver (Buttons 11 and 12 cannot be used).

BAND button:
Switches the FM and AM bands in turn.

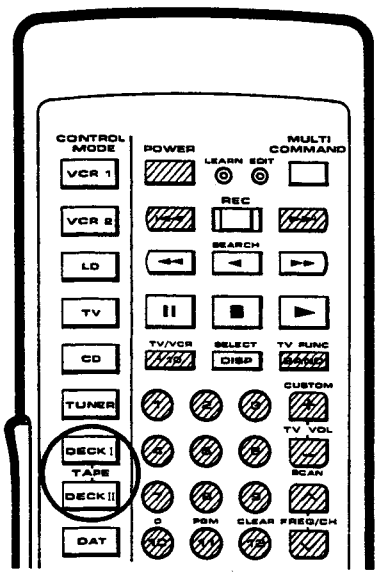
SCAN button:
Press when you want to operate memory scan.

CUSTOM button:
Press when you want to recall a custom memory genre name.

FREQ (∧, ∨) buttons:
Shifts the frequency up (∧) and down (∨).

<AFB1455>

DECK I, II operation



When using a single cassette deck, select DECK II.

REC button:
Selects the recording or recording standby mode.

◄◄, ►► (FF) buttons:
Rapidly advances the tape in the direction of the arrow.

◄ (PLAY) button:
Selects reverse playback.

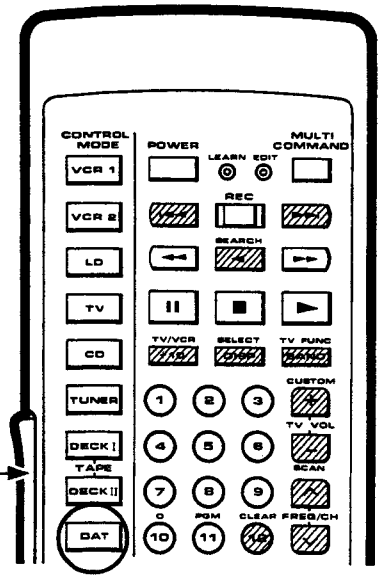
❚❚ (PAUSE) button:
Temporarily stops tape transport. Press again to resume tape transport.

■ (STOP) button:
Stops tape transport.

► (PLAY) button:
Selects forward playback.

SELECT button:
Selects the cassette No. (1 to 6) for multi-cassette changer.

DAT (Digital Audio Tape deck) operation



POWER button:
Switches DAT deck power ON/OFF.

REC button:
Selects the recording mode.

◄◄ (REW) button:
Rewind.

►► (FF) button:
Fast forward.

❚❚ (PAUSE) button:
Temporarily stops tape transport.
Press again to resume tape transport.

■ (STOP) button:
Stops tape transport.

► (PLAY) button:
Playback.

1—10 buttons:
Use to input numbers.

PGM (PROGRAM) button:
Use to playback a program.

MODE CHECK button

When you press the MODE CHECK button, the button for the present CONTROL MODE (for example, LD) lights. If you continue pressing the button, the CONTROL MODE changes in sequence.

PROGRAMMING

The LEARN mode and the EDIT mode are available for programming.
In the EDIT MODE, there is a PRESET mode and a MULTI-EDIT mode.

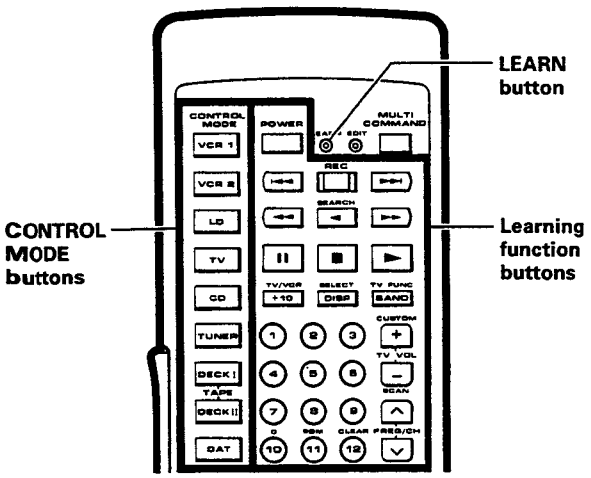
- **LEARN MODE:** In each CONTROL MODE, a single remote control signal can be input into each of the operation buttons.
- **EDIT MODE**
  PRESET MODE: In the VCR 1, VCR 2, or TV CONTROL MODE, you can select and use one of the 12 kinds of preset remote control signals.
  MULTI-EDIT MODE: Input up to seven commands into the MULTI-COMMAND button, and transmit the sequence of commands at the push of a single button.

LEARN

This system's remote control can "learn" the commands of other remote control units, regardless of manufacturer, as long as the other unit is of the infrared type.
On rare occasions, programming this unit may be impossible with some special types of infrared remote control units.
In some cases you may still need the original remote control unit for special situations. But as a rule, you will be able to use this Pioneer remote control for most system control needs, including video as well as audio equipment.

Learning capacity and buttons that can learn

The buttons shown in the diagram can learn. By changing the CONTROL MODE, a single button can be used to learn a maximum of nine commands, enabling a total of 261 commands to be learned. However, the capacity for learning differs depending on the remote control signal. With Pioneer remote control signals, about 70 commands can be learned.

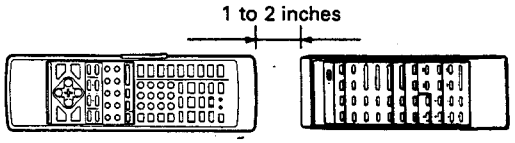


[Learning procedure]

1. **Press the LEARN button to switch to the LEARN mode.**
2. **Press one of the CONTROL MODE buttons.**
3. **Press one of the learning function buttons that can learn.**
4. **Receive a remote control signal from another remote control and learn.**

[Operation example]

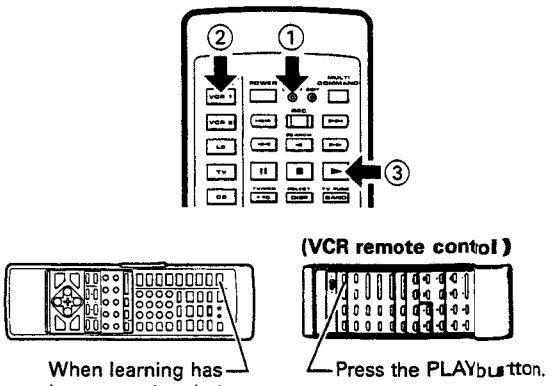
How to use the CONTROL MODE VCR 1 [►] button to learn the VCR PLAY signal
Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.
NOTE:
Be sure to place the remote controls on a stable surface such as a table while doing this. Also, avoid placing near fluorescent lighting fixtures or in direct sunlight. When programming operations, use new batteries.



Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches).
Memorization will not be possible if they are too close.

1. **Press the LEARN button.**
   - All the CONTROL MODE buttons flash at random.
2. **Press the VCR 1 CONTROL MODE button.**
   - Only the VCR 1 button flashes.
3. **Press the [►] button.**
   - The VCR 1 button goes out, and lights after about one second. If you perform procedure 4 before the VCR 1 button lights, correct learning is not possible, so be sure to confirm that the button is lit.
4. **Continue pressing the PLAY button on the VCR remote control.**
   - When learning is completed, the VCR 1 button goes out, and all the CONTROL MODE buttons flash at random. The VCR 1 [►] button has learned the new signal.
     During the learning operation, if you press the VCR [►] button twice, or move the remote control, correct learning is not possible.

To continue learning with other buttons, start from procedure 2.


②
①
③
(VCR remote control)
When learning has been completed, the remote control returns to the condition in procedure 1.
Press the PLAY button.

To end the learning operation, press the LEARN button.

[When learning is not possible]

After the selected CONTROL MODE button (for example VCR 1) flashes twice, and all the CONTROL MODE buttons flash, repeat the learning operations from procedure 2.

[When learning is not possible because memory is full]

After the selected CONTROL MODE button (for example VCR 1) flashes four times, the LEARN MODE is canceled.

If the memory becomes full even when you have used only a small number of buttons for learning, take the following steps.

- **Try learning once more using the button that resulted in full memory.**

Memory may appear to be full even when it is not owing to the two remote controls being too far apart, not enough power remaining in the batteries, or the effect of light from fluorescent lighting fixtures or direct sunlight.

- **Check buttons already used for learning.**

If the CONTROL MODE button remains lit after you have quickly pressed and released a button used for learning, memorization in that button is incorrect, resulting in the memory full condition. If you perform learning once more, abnormal data is cleared, returning you to normal conditions.

NOTE:

- *After pressing the LEARN button, if you do not press a button within approx. 30 seconds, the LEARN MODE is canceled.*
- *After pressing one CONTROL MODE button, if you do not press a button that can learn within approx. 30 seconds, the LEARN MODE is canceled. If a button other than one that can learn is pressed, the condition for CONTROL MODE button input is resumed.*
- *After pressing an operation button that can learn, if a remote control signal is not received within 45 seconds, the LEARN MODE is canceled.*

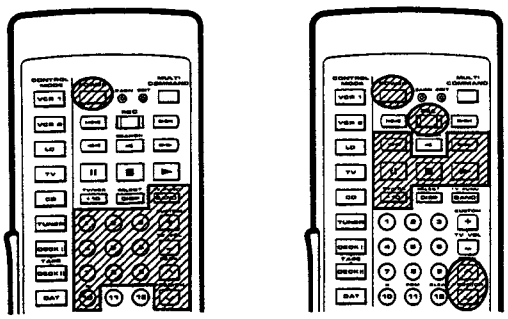
EDIT

In the EDIT MODE, there is the PRESET MODE and MULTI-EDIT MODE.

PRESET MODE (TV, VCR 1, VCR 2)

12 kinds of remote control signal formats are already preset for basic TV and VCR functions. If they conform to your TV or VCR functions, you can automatically preset operation buttons with the desired format's remote control signals and use to command operations. It is not necessary to learn commands one at a time.
Preset operation buttons are indicated in the diagram by ▨.
When you also want to use other buttons, use the LEARN operation to memorize commands.

(TV) (VCR)



Button functions are the same as Pioneer's unified remote control code functions, so refer to page 38 concerning TV functions, and page 37 concerning VCR functions.

NOTE:

- *If there is a remote control operation button for a function your TV or VCR does not have, operation is not possible.*
- *Depending on the kind of remote control signal, it may not be possible to preset TV FUNC buttons for TV operation.*
- *The Pioneer remote control code remains without presetting for TV DISP, 11 and 12 buttons and VCR DISP, 1 to 12 buttons.*

[Procedure for presetting]

1. **Press the EDIT button to switch to the EDIT mode.**
2. **Press one of the CONTROL MODE buttons (VCR 1, VCR 2, or TV).**
3. **Press one of the buttons 1 to 12.**
   - One kind of code is preset.
   - To continue presetting, repeat operation procedures 2 and 3.
4. **Press the EDIT button.**
   - The EDIT mode is canceled.
5. **Confirm that the component (TV or VCR) can be operated by the preset code.**
   If operation is not possible, repeat the procedures from step 2, and press a different number button (1—12) at step 3 to search for a preset code that enables operation. Refer to the diagram on page 43.

[Operation example]

How to preset in VCR 1.

1. **Press the EDIT button.**
   - The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence.
2. **Press the VCR 1 CONTROL MODE button.**
   - Only the VCR 1 button flashes.
3. **Press one of the buttons 1 to 12.**
   - For example, if you press button 1, the remote control signal format selected with VCR 1 operation button 1 is preset. The CONTROL MODE buttons light in sequence (indicating that registration has been completed), and then the VCR 1, VCR 2, and TV buttons flash in sequence. (Returning to the condition in procedure 1.)
   - To continue presetting for VCR 2 and TV, repeat operation procedures 2 and 3.
4. **Press the EDIT button.**
   - The EDIT mode is canceled.
5. **Point the remote control at the sensor window of the VCR you want to operate and press an operation button to confirm that operation is possible.**
   - If operation is possible, presetting has been completed.
   - If operation is not possible, repeat the procedures from step 2, selecting a different number button (1 to 12) at step 3.

If there is a button among buttons 1 to 12 that cannot operate, press the EDIT button once more to cancel the EDIT mode, and memorize in the LEARN mode.

NOTE:

- *After pressing the EDIT button, if you do not press a button within approx. one minute, the EDIT mode is canceled.*
- *After presetting, you can use the LEARN mode to memorize a command in a preset button, but the preset signal is erased.*
- *After memorizing in the LEARN mode, if you preset operations under specified buttons, signals memorized in the LEARN mode are cleared.*

MULTI-EDIT MODE

A maximum of seven commands can be programmed in to MULTI COMMAND button. This enables a series of signals to be transmitted simply by pushing the MULTI COMMAND button.
(Example) Programming the following three commands into the MULTI COMMAND button.

① RECEIVER POWER
② RECEIVER FUNCTION CD
③ CD PLAY (►)

1. **Press the EDIT button. (Switches to the EDIT mode)**
   - The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence.
2. **Press the MULTI COMMAND button. (Switches to the MULTI-EDIT mode)**
   - The CONTROL MODE buttons flash at random.
3. **Press the RECEIVER POWER button.**
   - The CONTROL MODE buttons go out, and then flash at random. (Registration is completed)

4. **Press the CD receiver input selector button.**
   - The CONTROL MODE buttons go out, and then flash at random. (Registration is completed)
5. **Press the CD CONTROL MODE button.**
   - The CD button flashes.
6. **Press the PLAY (►) button.**
   - The CD button goes out, and then the CONTROL MODE buttons flash at random. (Registration is completed)
7. **Press the MULTI COMMAND button.**
   - The CONTROL MODE buttons light in sequence (This means that registration has been completed), and then the VCR 1, VCR 2, and TV buttons flash in sequence.
8. **Press the EDIT button.**
   - The EDIT mode is canceled.

If you press the MULTI COMMAND button, these remote control signals are transmitted in the order programmed, so if CONTROL IN/OUT is connected (refer to page 28), and if remote control signals can reach both the receiver and CD player sensor windows, power to the receiver switches on, the input selector switches to CD, and the CD player starts playing. (When the CD player's power cord is plugged into the receiver's switched AC OUTLET.)

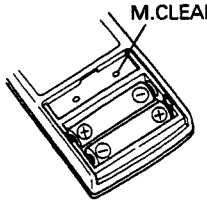
NOTE:

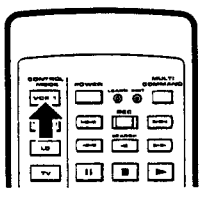
- *After pressing the seventh command, the MULTI-EDIT mode is registered automatically (The VCR 1, VCR 2, and TV CONTROL MODE buttons flash in sequence), but the EDIT mode is not canceled. To cancel the EDIT mode, press the EDIT button.*
- *After memorizing six or less commands, if you cancel the EDIT mode without pressing the MULTI COMMAND button again, all the registered commands are cleared, leaving the previous commands as they were.*
- *If a button is for transmission, even if it is not an operation button in the selected CONTROL MODE, registration is still possible. (Buttons such as the VCR 1 |◄◄).*
  In this case, during signal transmission, the CONTROL MODE button momentarily lights, but the remote control code is not transmitted.
- *If the component to be operated is installed at a distance, if there is an obstacle between a specific component sensor window and the remote control, or if component operation speeds are very different, MULTI-COMMAND operation may be incorrect. When repeating operations, first return to the initial settings for each component. For operations such as power ON/OFF, if components are switched ON, they can be switched OFF by transmitting a signal.*

RETURNING TO THE INITIAL SETTINGS

Initialization of particular CONTROL MODES

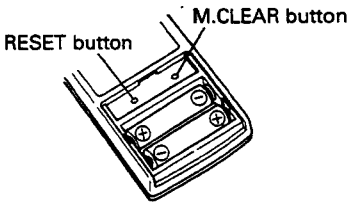
1. **Remove the battery compartment cover.**
2. **While pressing the M.CLEAR button inside the cover, press the button for the CONTROL MODE (for example VCR 1) you want to initialize.**
   - For example, if you initialize VCR 1 using the method mentioned above, the CONTROL MODE button lights for about one second, and the VCR 1 operation buttons are initialized.





Initializing the entire memory

1. **Remove the battery compartment cover.**
2. **While pressing the M.CLEAR button inside the cover, press the RESET button.**
   - Do not release the M.CLEAR button before releasing the RESET button. While pressing the M.CLEAR button, press the RESET button, and quickly release.
     Initialization is not possible if the buttons are pressed in the reverse order.
   - All the CONTROL MODE operation buttons are initialized, and data in the MULTI COMMAND button is cleared.



REMOTE CONTROL CODES OF OTHER MANUFACTURERS ALREADY PRESET

The following table shows the PRESET MODE buttons (1 to 12) used to call up the remote control codes of other manufacturers. Preset remote control signals in the table, however, may not always enable operation. If operation is not possible, switch to the LEARN mode, and learn signals from the VCR or TV remote control. Numbers in parenthesis indicate a reduced possibility of operation.

Manufacturer	TV	VCR
RCA	1, (10)	(1), (6)
ZENITH	3	(3), (4)
GE	8, (11), (1)	(1), (8)
SONY	4	4
TOSHIBA	5	5, (9)
HITACHI	6, (10)	6
PHILIPS	7	—
JVC	—	7
PANASONIC	8	8
MITSUBISHI	9, (10)	9
SANYO	—	10, (12)
SHARP	(2)	2
GOLD STAR	(10)	(11)
MAGNAVOX	(7), (10), (12)	(8), (9)
SYLVANIA	(7), (10), (12)	(8), (9)
QUASER	8	8
FISHER	—	12, (10)
WARD'S	(2), (7), (10), (11)	(2)

OPERATING USING GUI

GUI

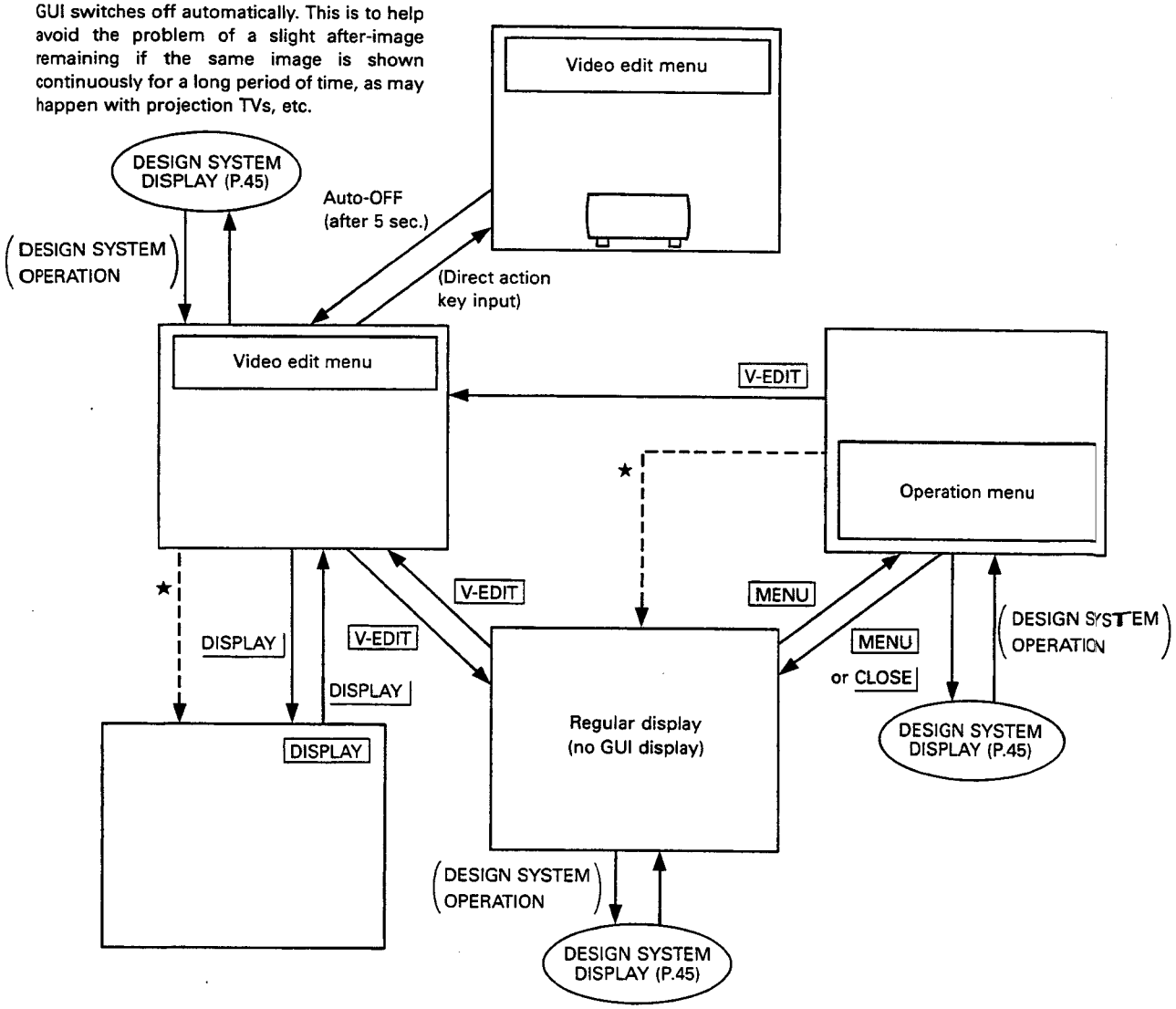
GUI (Graphic User Interface) is an operating system using a TV screen and remote control unit.

- Use the remote control's operation buttons to select and operate the desired buttons on the operation panels displayed on the TV screen.
  - Press the remote control's MENU, V-EDIT, DESIGN, or PARAMETER button, and the corresponding operation panel is displayed on the TV screen.
  - You can move the cursor (the hand-shaped mark) displayed on the TV screen with the △, ▽, ◁, and ▷ buttons.
  - To perform an operation or make a selection, move the cursor (the hand-shaped mark) to the desired operation or function button, and press the ENTER button.

MENU:
Lets you operate the built-in tuner or an external component.
V-EDIT:
Lets you use the audio mixing and A/V fader functions for the input signal from the front panel VIDEO INPUT jacks.
DESIGN:
Lets you create your own systems by combining four of the 10 available built-in function components.
PARAMETER:
Lets you adjust such parameters as the settings and mode of function components in a system. Parameter values are indicated by images displayed on the TV screen.

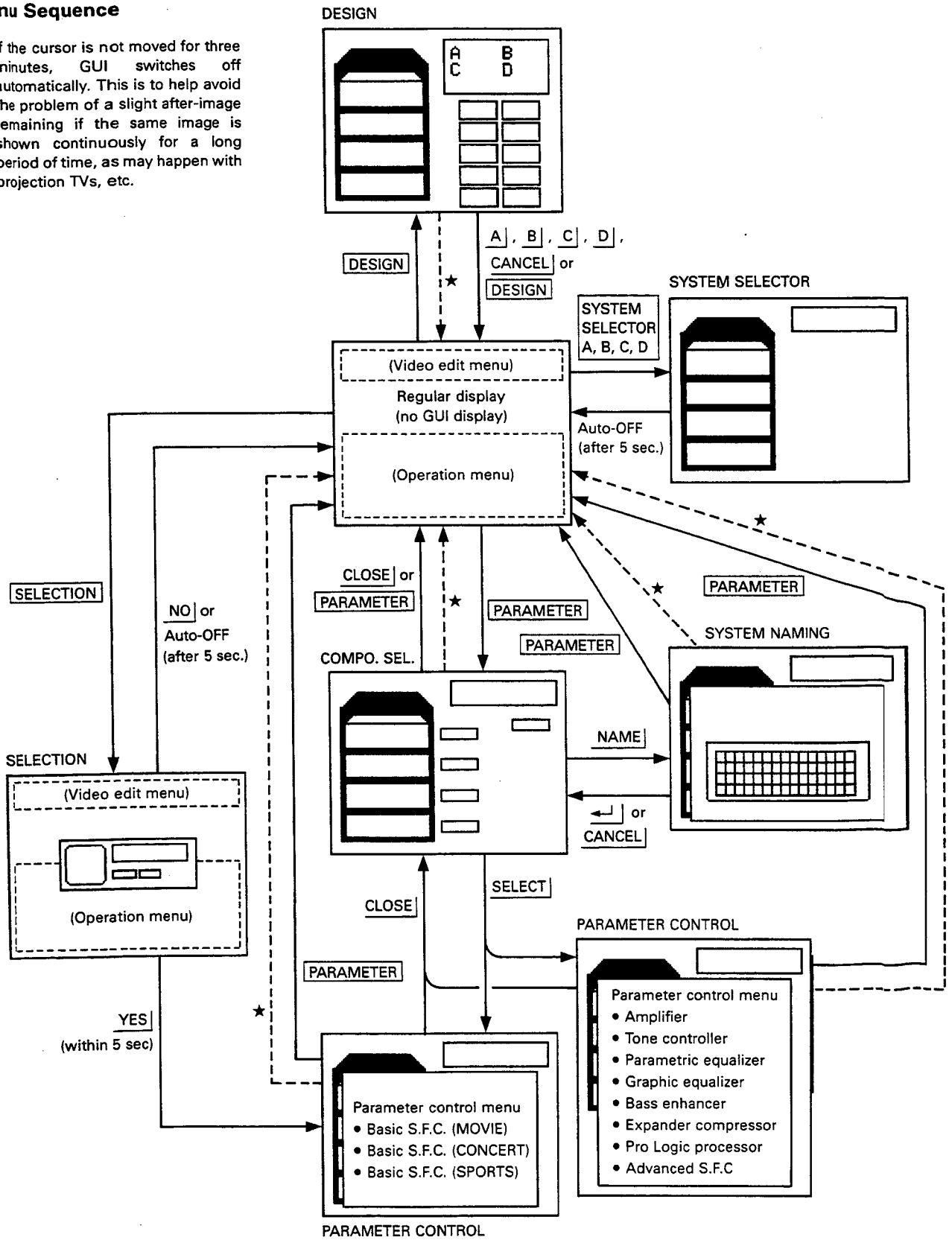
MENU, V-EDIT Menu Sequence

★ : If the cursor is not moved for three minutes, GUI switches off automatically. This is to help avoid the problem of a slight after-image remaining if the same image is shown continuously for a long period of time, as may happen with projection TVs, etc.



Menu Sequence

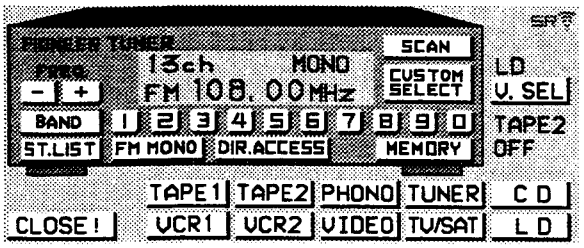
★ : If the cursor is not moved for three minutes, GUI switches off automatically. This is to help avoid the problem of a slight after-image remaining if the same image is shown continuously for a long period of time, as may happen with projection TVs, etc.



OPERATING TUNER (GUI OPERATION)

Calling up the tuner operation display

1. **Press the MENU button on the remote control.**
   - An image of a component is displayed in the bottom half of the TV screen.
   - If the component is anything other than the tuner, move the cursor (the hand-shaped mark) to "TUNER" under the tuner image with the △, ▽, ◁, and ▷ buttons, and press the ENTER button (or press the input selector TUNER button, and press MENU button).



2. **Switch the TAPE 2 MONITOR OFF.**
   - If "TAPE 2 ON" is displayed on the right side of the tuner image (when the TAPE 2 indicator is lit in the main display section), move the cursor to "TAPE 2" at the bottom of the display with the △, ▽, ◁, and ▷ buttons, and press the ENTER button to display "TAPE 2 OFF".
3. **When tuner operation display is not required, move the cursor to "CLOSE!" at bottom left with the △, ▽, ◁, and ▷ buttons, and press the ENTER button.**

MANUAL/AUTO TUNING

1. **Move the cursor to "BAND" on the left side of the tuner image with the △, ▽, ◁, and ▷ buttons, press the ENTER button to select FM or AM.**
2. **Set the cursor to "FREQ.+" for higher frequencies or to "FREQ.−" for lower frequencies.**
   The TUNED indicator lights up when a station of sufficient signal strength is tuned in.

- **One Step Tuning**
  Press the ENTER button and release quickly. The frequency will change by one step each time the button is pressed. Press as many times as necessary to tune in the desired station.
- **Auto Tuning**
  Press the ENTER button until the frequency starts to change (about 1 sec.), then release it. The tuner automatically searches for a broadcasting station and stops when one is found, and the TUNED indicator lights up.

NOTE:
When the signal level is too weak for reception, the unit cannot perform Auto tuning. In this case, change to Manual tuning.

- **High Speed Manual Tuning**
  Keep the ENTER button pressed. The frequency changes continuously, and stops when the button is released.

FM auto stereo reception and monaural reception

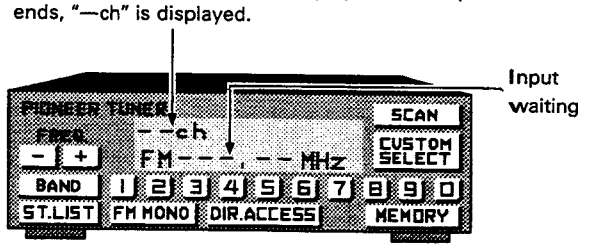
Move the cursor to "FM MONO" in the center of the tuner image with the △, ▽, ◁, and ▷ buttons. Each time you press the ENTER button, "MONO" above the frequency indications in the center of the image comes on and goes out (the MONO indicator in the main display comes on and goes out in the same way).

- If an FM stereo broadcast is received when the MONO indicator is out, the STEREO indicator on the display section lights, and sound is in stereo.
- If an FM stereo broadcast is received when the MONO indicator is lit, the sound will be monaural.
  If there is interference during STEREO mode reception, switch to MONO. The sound will become monaural but interference will be reduced.

DIRECT ACCESS TUNING

1. **Move the cursor to "BAND" in the tuner image withthe △, ▽, ◁, and ▷ buttons, press the ENTER button to select FM or AM.**
2. **Move the cursor to "DIR.ACCESS" in the tuner image, and press ENTER.**

The number of the currently received channel during DIRECT ACCESS operation is displayed. When operation ends, "—ch" is displayed.



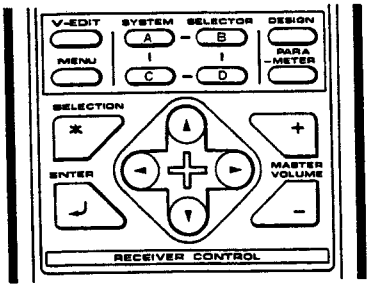
- If you don't move the cursor for five seconds, the DIRECT ACCESS input display is canceled, and you return to the regular display.

3. **Input the frequency of a desired broadcast station, starting with the first digit. Input each digit in order by moving the cursor to the desired number key (1 to 9, 0) in the tuner image, and pressing the ENTER button.**

Direct access tuning example: To receive FM 106.00MHz

① Move the cursor to "BAND", press the ENTER button, and select FM.
② Move the cursor to "DIR.ACCESS" and press the ENTER button.
③ Move the cursor to "1" and press the ENTER button.
④ Move the cursor to "0" and press the ENTER button.
⑤ Move the cursor to "6" and press the ENTER button.
⑥ Move the cursor to "0" and press the ENTER button.
⑦ If the receiver is a multi-voltage model, when the CHANNEL STEP switch is set to FM 50 kHz, press the ENTER button once more (to input one more "0"). When the CHANNEL STEP switch is set to FM 100 kHz, with U.S. and Canadian models, procedure ⑦ is not necessary.

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.



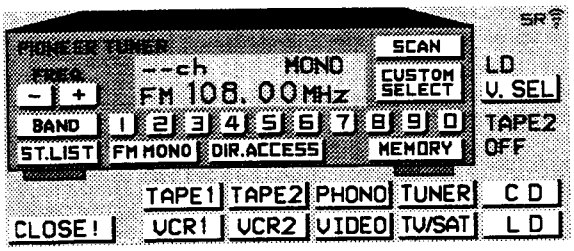
PRESET TUNING

You can preset up to 30 FM/AM stations for easy recall.
At the same time, you can also memorize stations under the following five different genre names according to the material played on the station (Custom memory).
The five following genres are available.
ROCK, POP, JAZZ, NEWS, PARTY

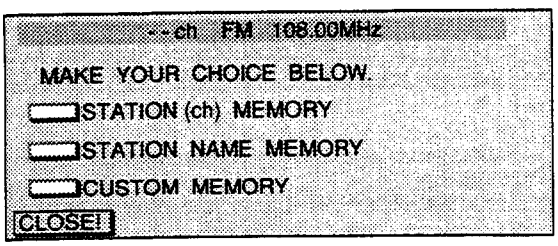
Station Presetting and Custom memory Selection

[Station Presetting]

1. **Tune in the desired station.**
   - Refer to "MANUAL/AUTO TUNING" or "DIRECT ACCESS TUNING" for tuning procedure.

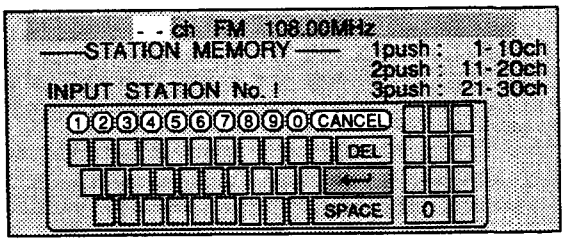


2. **Move the cursor to "MEMORY" in the tuner image with the △, ▽, ◁, and ▷ buttons, and press the ENTER button.**
   - The MEMORY SELECT menu is displayed.

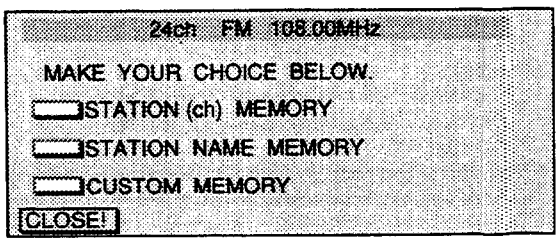


   - Move the cursor to "CLOSE!", press the ENTER button, and the display returns to the original menu.

3. **Move the cursor to "STATION (ch) MEMORY" by pressing the △ or ▽ button, and press the ENTER button.**
   - A typewriter keyboard is displayed.

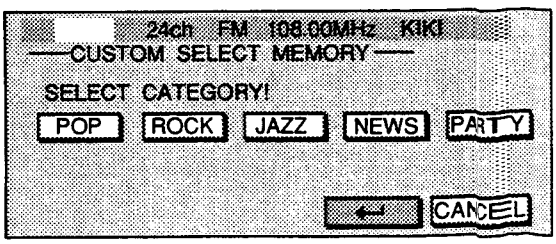


4. **Select the channel number you want to preset from the line of numbers (1 to 9, 0) above the displayed keyboard (move the cursor to the desired number and press the ENTER button).**
   - Press the ENTER button once to specify channels 1 to 10, press it twice to specify channels 11 to 20, and press it three times to specify channel numbers 21 to 30.
     [Example] If you select "3":
     Press the ENTER button once — channel 3
     Press the ENTER button twice — channel 13
     Press the ENTER button three times — channel 23
   - To cancel presetting, move the cursor to "CANCEL" on the keyboard, and press the ENTER button.
5. **Move the cursor to "◄┘" (RETURN) on the keyboard, and press the ENTER button.**
   - This returns you to the MEMORY SELECT menu.



[Custom Memory Selection]

6. **Move the cursor to "CUSTOM MEMORY" by pressing the △ or ▽ button, and press the ENTER button.**

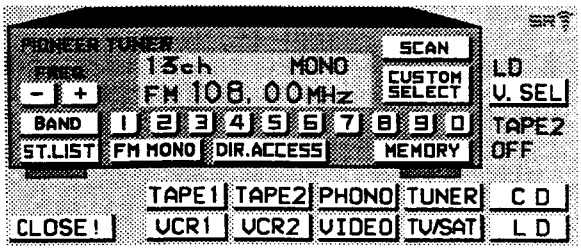


7. **Move the cursor to the desired category (POP, ROCK, JAZZ, NEWS, PARTY) by pressing the ▷ or ◁ button, and press the ENTER button.**
   - To cancel category selection, move the cursor to "CANCEL", and press the ENTER button.

8. **Move the cursor to "↵" (RETURN), and press the ENTER button.**
   - This returns you to the MEMORY SELECT menu. If you move the cursor to "CLOSE!" on the MEMORY SELECT menu, and press the ENTER button once more, you return to the original menu display.

To program Custom Memory into which stations have already been memorized, or to change memorized data, perform procedures 6 to 8.

Listening To Broadcasts Using Preset Tuning



[When recalling with the channel number]

1. **Select the channel number of the station you want to receive from the numbers (1 to 9, 0) in the tuner image (Move the cursor to the desired number with the △, ▽, ◁, and ▷ buttons, and press the ENTER button).**

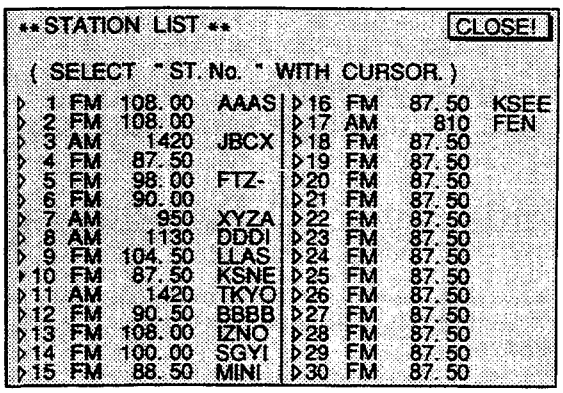
   - Press the ENTER button once to specify channels 1 to 10, press it twice to specify channels 11 to 20, and press it three times to specify channel numbers 21 to 30.

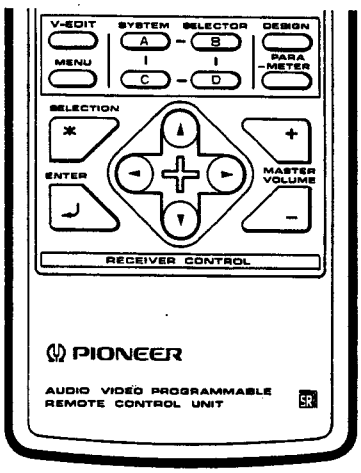
   [Example] If you select "3":
   Press the ENTER button once — channel 3
   Press the ENTER button twice — channel 13
   Press the ENTER button three times — channel 23

   - The channel can also be specified with the remote control's number buttons. Press the number button once to recall preset channels 1 to 10, press it twice to recall preset channels 11 to 20, and press it three times to recall preset channels 21 to 30.

[When selecting from the Station List display]

1. **Move the cursor to "ST.LIST" in the tuner image, and press the ENTER button.**
   - A list of the preset stations is displayed.





2. **Move the cursor to the channel number (ST.No.) of the station you want to receive, and press the ENTER button.**
   - The specified station is received.
3. **Move the cursor to "CLOSE!" above the list on the right, and press the ENTER button to return to the original menu display.**

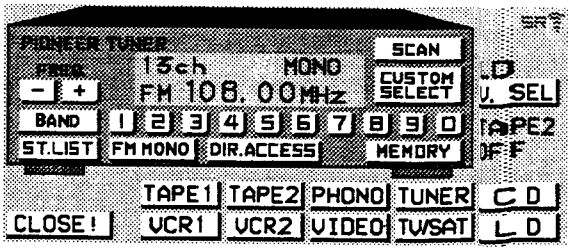
Last Station Memory

When the POWER switch is pressed to turn the power on, the last station received before the power was turned off will be tuned in again.
When the power is ON, if the BAND FM/AM button is pressed, the last station received on that band will be tuned in again.

Memory Scan

Reception of consecutive broadcast stations memorized (each station is received for about five seconds).

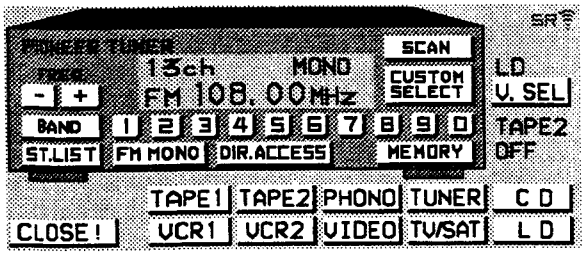
[Scanning all the Stations Memorized]



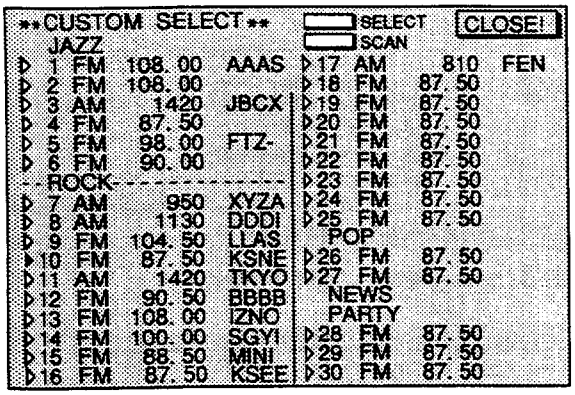
1. **Move the cursor to "SCAN" in the tuner image, and press the ENTER button.**
   - Preset stations are received in order for fives seconds each.
   - If you leave the cursor on "SCAN" and press the ENTER button once more, scan operation ends, and reception of the station being received at that time continues.

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

[Scanning the Genres in the Custom Memory]



1. **Move the cursor to "CUSTOM SELECT" in the tuner image, and press the ENTER button.**
   - A list of preset stations divided by genre is displayed.

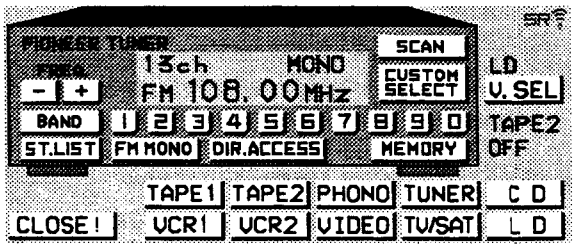


2. **Move the cursor to "SELECT" above the list, and press the ENTER button.**
   - Each time you press the ENTER button, the specified genre changes in sequence (JAZZ, ROCK, POP, NEWS, PARTY).
   - The genre specified in the list is indicated by "----" on either side of the genre name.
3. **Move the cursor to "SCAN" above the list, and press the ENTER button.**
   - Stations in the selected genre are received for five seconds each in order.
   - If you leave the cursor on "SCAN" and press the ENTER button once more, scan operation ends, and reception of the station being received at that time continues.
4. **Move the cursor to "CLOSE!" above the list on the right, and press the ENTER button to return to the original menu display.**

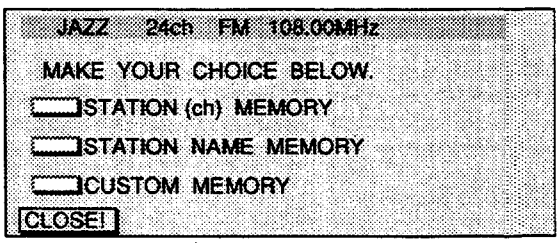
NAMING A STATION

If desired, you may memorize station call-letters and display them.

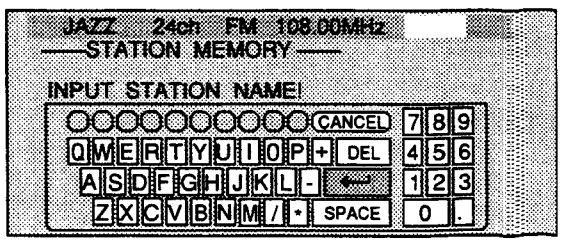
1. **Tune in the desired station.**
   - Recall stations that are already preset with the channel number.



2. **Move the cursor to "MEMORY" in the center of the tuner image with the △, ▽, ◁, and ▷ buttons, and press the ENTER button.**
   - The MEMORY SELECT menu is displayed.



   - Move the cursor to "CLOSE!", press the ENTER button, and the display returns to the original menu.
3. **Move the cursor to "STATION NAME MEMORY" by pressing the △ or ▽ button, and press the ENTER button.**
   - A typewriter keyboard is displayed.



4. **Select the desired characters on the displayed keyboard (move the cursor to the desired character and press the ENTER button).**
   - Select numbers with the keyboard's 10-key pad on the right.
   - Select "SPACE" when you want a space.
   - Repeating procedure 4 lets you input up to four characters.
   - To cancel operation, move the cursor to "CANCEL" on the keyboard, and press the ENTER button.
5. **Moving the cursor to "←┘" (RETURN) on the keyboard, and pressing the ENTER button.**
   - This returns you to the MEMORY SELECT menu. If you move the cursor to "CLOSE!" on the MEMORY SELECT menu, and press the ENTER button once more, you return to the original menu display.

OPERATING EXTERNAL COMPONENTS (GUI OPERATION)

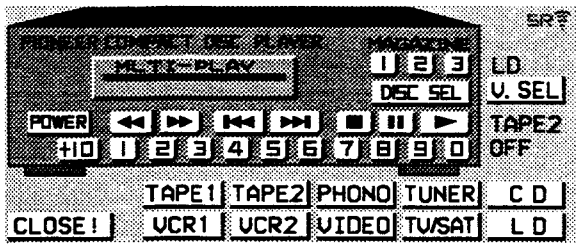
The GUI operation can be used to operate some functions of PIONEER SR marked VCRs, TV sets, LD players, cassette decks, turntables, and CD players.

REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIO-VISUAL COMPONENTS VIA THIS UNIT REQUIRES:
- All components must have remote control jacks (IN/OUT) on the rear panel and be correctly connected to the receiver according to the diagram on page 28.

When operating components other than the receiver:

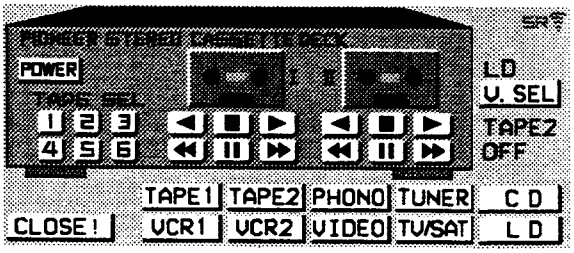
1. **Press the MENU button on the remote control.**
   - An image of the component corresponding to the position of the input selector is displayed in the bottom half of the TV screen.
   - If you want to operate a component other than the one displayed, move the cursor (the hand-shaped mark) under the image of "TAPE1", "PHONO", "CD", "VCR1", "VCR2", "VIDEO", "TV/SAT", or "LD" with the △, ▽, ◁, and ▷ buttons, and press the ENTER button (or select with the input selector, and press MENU button).
2. **Move the cursor to the desired operation key in the center of the image, and press the ENTER button on the remote control.**
   - Operation commands are transmitted from the receiver to the component via the control cord.
3. **When the operation display is not required, move the cursor to "CLOSE!" at bottom left with the △, ▽, ◁, and ▷ buttons, and press the ENTER button (you can also cancel the operation display by pressing the MENU button once more).**

[CD] (CD player)



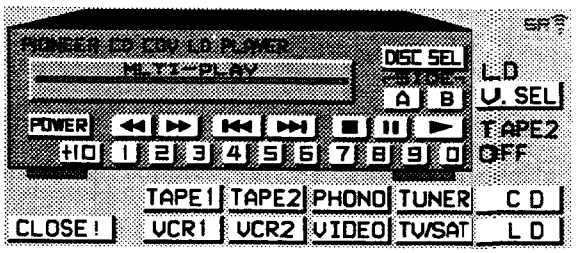
POWER : Switches CD player power ON/OFF.
◄◄ : Selects fast backward.
►► : Selects fast forward.
I◄◄ : Returns to the beginning of the track currently playing.
►►I : Advances to the next track.
■ : Stops playback.
❚❚ : Pauses playback.
► : Selects playback.
MAGAZINE 1, 2, 3 : Selects the MAGAZINE No. (1 to 3) for Multi-play CD players.
DISC SEL : Selects the DISC No. (1 to 6) for Multi-play CD players.
+10 : Use when selecting a track number higher than 10. For example, to select 21, select "+10" twice and then "1". "+10" cannot be used with some PIONEER CD players.
1—9, 0 : For direct selection of a track.

[TAPE 1] (Cassette deck)



When using a single cassette deck, use "II" side.
POWER : Switches cassette deck power ON/OFF. (This key cannot be used with some PIONEER cassette decks.)
TAPE SEL (1—6) : Selects the cassette No. for multi-cassette changer. ["I": Deck I, "II": Deck II]
◄ : Selects reverse playback.
■ : Stops tape transport.
► : Selects forward playback.
◄◄, ►► : Rapidly advances the tape in the direction of arrow.
❚❚ : Temporarily stops tape transport. Press again to resume tape transport.

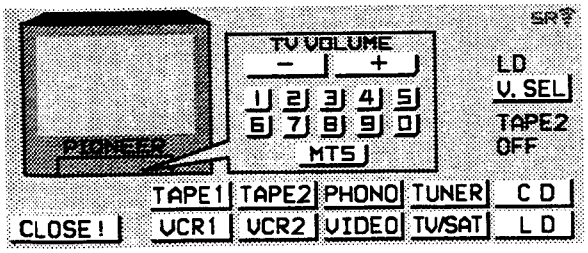
[LD] (LD player/CD CDV LD player)



POWER : Switches LD player power ON/OFF.
◄◄ : Selects fast backward.
►► : Selects fast forward.
I◄◄ : Searches for the start of the chapter playing.
►►I : Searches for the start of the next chapter.
■ : Playback is stopped when selected once. Selecting again causes the disc tray to come out.
❚❚ : Video and audio are stopped and playback is paused.
► : Selects playback.
DISC SEL : Selects the CD/CDV disc No. (1 to 5) for Multi-play CD CDV LD players.
SIDE A, B : Selects playback LD disc side (A/B).
+10 : Use to input such information as chapter numbers higher than 10.
1—9, 0 : For direct selection of a chapter.

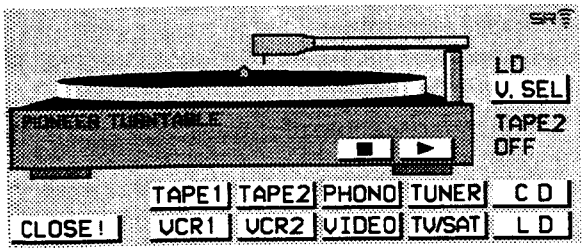
■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

[TV]



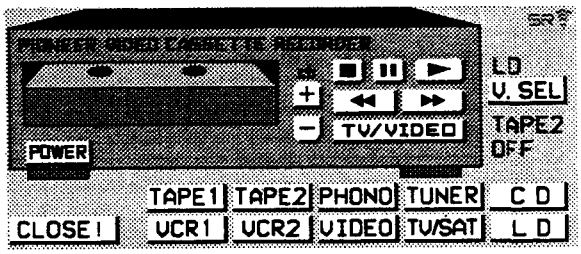
TV VOL +, − : Raises and lowers the volume.
1—0 : Used to call up channels.
MTS : Selects the reception mode for multi-channel TV sound.

[PHONO] (Turntable)



■ : Stops playback. ► : Starts playback.

[VCR 1, VCR 2, VIDEO] (Video cassette deck)



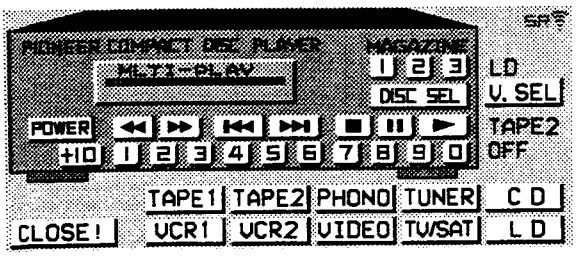
POWER : Switches VCR power ON/OFF.
ch+ : Shifts channels in ascending order.
ch− : Shifts channels in descending order.
► : Selects playback.
❚❚ : Sets pause and still picture.
■ : Stops tape transport.
◄◄ : Rewinds the tape and picture search.
►► : Rapidly advances the tape and picture search.
TV/VIDEO : This can be used only for VCRs with a TV/VCR selector. Toggles the antenna output between TV and VCR.

OPERATING VIDEO SIGNAL SELECTOR (GUI OPERATION)

This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to playback and record video images different from the playback sound source.

For example, VCR 1 can record a video disc picture mixed with CD sound.

1. **Set the input selector to CD.**
2. **Press the MENU button on the remote control.**
   • An image of the component is displayed in the bottom half of the TV screen.



3. **Move the cursor to "V.SEL." on the right side of the image, and press the ENTER button repeatedly until LD is displayed above "V.SEL.".**
   • Each time you press the ENTER button, the video source is selected in sequence as follows.

→OFF →VCR 1 →VCR 2 →VIDEO →TV →LD

[Video Recording]

1. **Load VCR 1 or VCR 2 with a tape for video recording.**
   • If you select VCR 1 with "V. SEL", record on VCR 2, and if you select VCR 2, record on VCR 1.
   If you select LD, TV, or VIDEO, you can record on either VCR 1 or VCR 2.
2. **Start recording on the VCR loaded with the tape for recording.**
   • For VCR, select a line input (external input).
3. **Start playback of the component selected with the video signal selector (V. SEL) and the component selected with the input selector.**

CAUTION:

• If you must operate the video signal selector (V. SEL) during recording, do so after setting the recording VCR to the pause mode. If it is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which it is operated.
• If you experience no video or a wrong video picture, select the appropriate source by the input selector for the function being used.

EDITING VIDEO INPUT (GUI OPERATION)

When selecting VIDEO with the input selector, video input from the front panel VIDEO INPUT jacks can be edited. Video can be mixed with audio from another source, and audio and video can be faded in and out.

1. **Connect the source you want to edit to the front panel VIDEO INPUT jacks.**
2. **Select VIDEO with the input selector.**
3. **Press the V-EDIT button on the remote control.**
   - The mode switches to the editing mode, and the editing operation menu is displayed at the top of the TV screen.

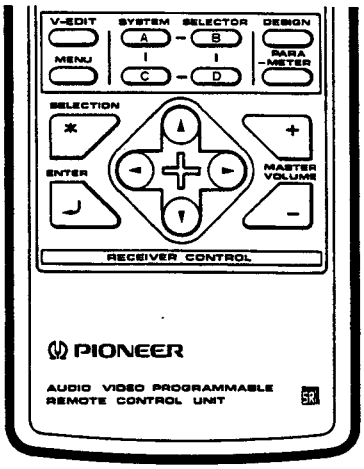
   - Press the V-EDIT button once more, and the edit operation menu and edit mode are canceled.

[Audio Mixing Operation]

4. **Move the cursor to "MIX FUNCTION" at the lower left of the edit operation menu, press the ENTER button, and select the desired source for mixing.**
   - When you switch to the edit mode, CD is selected. Each time you press the ENTER button, the selected source changes in sequence as follows.

CD → TUNER → PHONO → TAPE 1 → VCR 1 ← VCR 2 ← TV ← LD ←

5. **Move the cursor to MIX LEVEL "MUSIC" or "VIDEO", and press the ENTER button the required number of times to adjust the mixing level.**
   - Selecting "MUSIC" lets you raise the volume of the audio source selected in section 4. Selecting "VIDEO" lets you raise the volume of the VIDEO INPUT audio source.
   - When you switch to the edit mode, the front panel VIDEO INPUT audio source volume is at maximum level.



[AV Fader Operation]

6. **Move the cursor to AV FADER "COLOR", press the ENTER button, and select BLACK FADE or WHITE FADE.**
   - If you select BLACK FADE, the rectangular display below "COLOR" becomes black (the screen becomes black when fading out).
     If you select WHITE FADE, the rectangular display below "COLOR" becomes white (the screen becomes white when fading out).
7. **Move the cursor to AV FADER "IN OUT", press the ENTER button, and fade out begins.**
   - Fade out ends after about three seconds.
8. **After fading out, if the cursor is still on "IN OUT" and you press the ENTER button again, fade in begins.**
   - Fade in ends after about three seconds.

[To cancel the edit operation menu when still in the edit mode]

Move the cursor to "DISPLAY" above the edit menu on the right, press the ENTER button, and the edit menu clears from the TV screen, leaving "DISPLAY" only. Press the ENTER button again, and the edit menu appears once more on the TV screen.

NOTE:

- *If you cancel the edit mode (by pressing the V-EDIT button when the edit mode has been selected), settings such as mixing level and black/white fade are cleared, so the next time you select the edit mode, they must be set once more.*
- *During video editing, the input selector cannot be switched from "VIDEO".*

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

SELECTION AND DESIGN (GUI OPERATION)

This unit's built-in functions, such as Pro Logic, the Sound Field Controller, and the Frequency Equalizer are designed to be used as independent components. Using the system design function lets you combine these function components in original system configurations as desired. You can register up to four of these systems in the A, B, C, and D buttons for one-touch recall.
For inexperienced users, there are also four factory preset systems (STEREO, MOVIE, CONCERT, SPORTS) that can be called up in sequence with the SELECTION button.

SELECTION

Each time you press the SELECTION button, the four factory preset systems are recalled in sequence.

STEREO → MOVIE → CONCERT → SPORTS

[Function component combinations]

STEREO : Amplifier + Graphic equalizer + Expander/Compressor

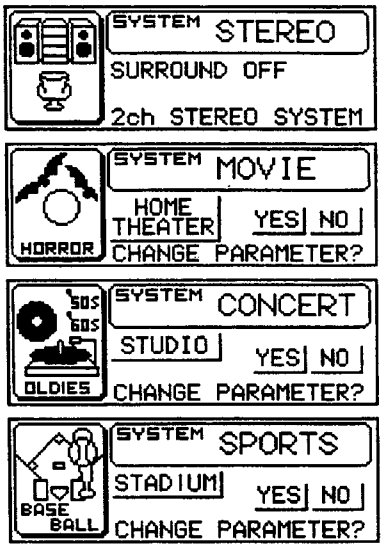
MOVIE : Amplifier + Pro Logic processor + Basic SFC (MOVIE) + Tone controller + Bass enhancer

CONCERT : Amplifier + Basic SFC (CONCERT) + Graphic equalizer + Bass enhancer

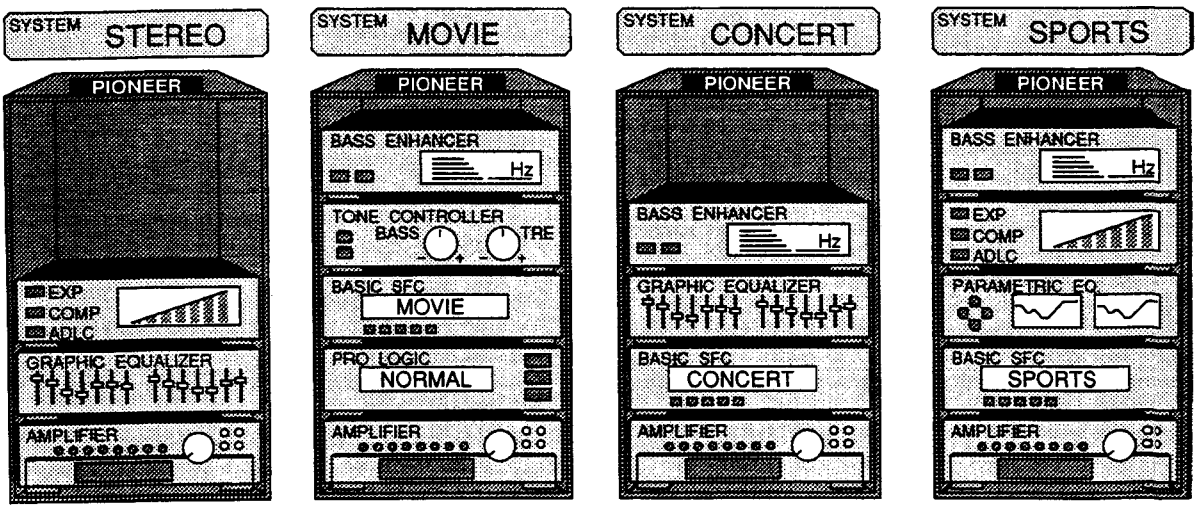
SPORTS : Amplifier + Basic SFC (SPORTS) + Parametric equalizer + Expander/Compressor + Bass enhancer

When you recall a system with the SELECTION button, the name of the system is displayed in the center of the TV screen for about five seconds.

- The display is one of those shown below.



- With "MOVIE", "CONCERT", and "SPORTS", the images on the left of the display differ depending on the SFC category setting.
- When these indications are displayed, if you press the ENTER button when the cursor (the hand-shaped mark) is above "YES", the display switches to BASIC SFC parameter control indications (see page 60).

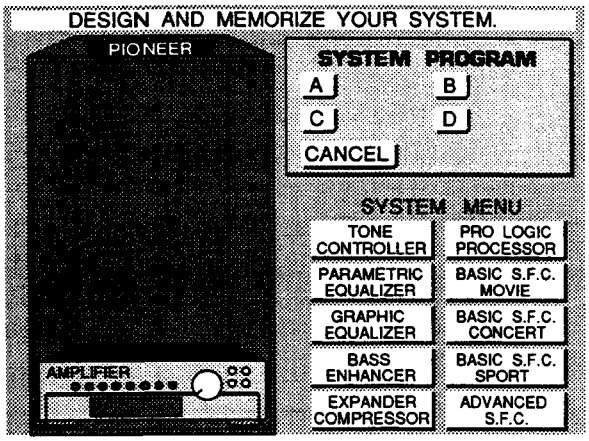


USER'S SYSTEM DESIGN

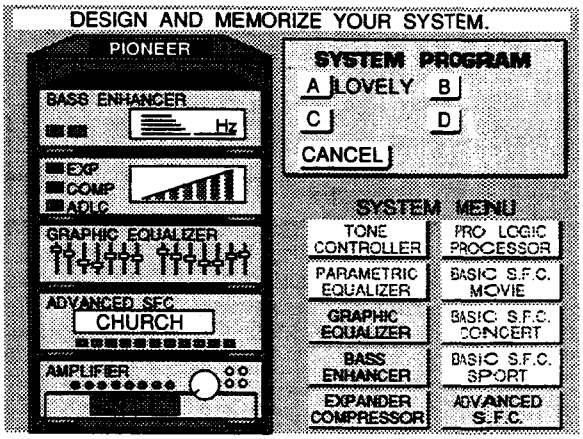
You can select four function components from the 10 available to create your own system configurations. (There are some function components that cannot be used at the same time.)

If you use the SELECTION button to choose STEREO, MOVIE, CONCERT or SPORTS, then you are automatically shifted into the DESIGN mode and can continue to create a new system by exchanging function components with those of the preset system as your base. You can use the presets as a reference for hints on designing systems for playback of particular program sources. You can also choose already registered systems of the SYSTEM SELECTOR and exchange function components to create new systems.

1. **Press the DESIGN button on the remote control.**
   - The system design menu is displayed on the TV screen.



   - "SYSTEM MENU" on the right of the display shows the function components available. The box on the left shows the system configuration, with only the AMPLIFIER image at the bottom. (If you have used the SELECTION button to choose a preset system or a system already registered in SYSTEM SELECTOR A, B, C, or D, then it will contain the images of that system's function components.)
   - To cancel design operations, move the cursor (the hand-shaped mark) to "CANCEL" with the △, ▽, ◁, and ▷ buttons, press the ENTER button, and the on-screen system design menu clears.
2. **Move the cursor to the component name in "SYSTEM MENU" on the right of the display that you want to register, and press the ENTER button.**
   - The image of the registered component is added to the box on the left side of the display.
   - If you specify a component in "SYSTEM MENU" that is already registered, it is canceled from the box on the left side of the display.
   - If the characters of a component listed in "SYSTEM MENU" are gray (dotted lines), this component cannot be selected for the system.
   - You can register a maximum of four components for a system.
3. **When you have completed designing a system, move the cursor to the letter A, B, C, or D (corresponding to SYSTEM SELECTOR buttons A, B, C, and D) in "SYSTEM PROGRAM" above "SYSTEM MENU" under which you want to store the system, and press the ENTER button.**
   - When the system has been stored, the system design menu clears.
   - You can assign a name of your choice to each of the systems stored under A, B, C, and D (see page 55).
   - Move the cursor to "CANCEL", press the ENTER button, and the system design menu clears without the system being stored.



TONE CONTROLLER:
For adjusting bass and treble tone.

PARAMETRIC EQUALIZER:
Boost or attenuate the signal level at your choice of three adjustable center frequencies: L, M, and H. Then you can join each of the points to change the characteristics of the equalization curve.

GRAPHIC EQUALIZER:
Adjust level at each of 7 fixed frequencies.

BASS ENHANCER:
Emphasizes low range at your choice of frequencies.

EXPANDER COMPRESSOR:
For expansion (makes loud sounds louder) or compression (makes faint sounds less faint) of the dynamic range of the audio source. Also enables use of A.D.L.C. (Automatic Digital Level Controller) to automatically compensate for differences in signal level of the various audio sources.

PRO LOGIC PROCESSOR:
Can be set to Dolby Pro Logic Surround or Dolby 3CH Logic.

BASIC S.F.C. MOVIE:
Creates sound field suitable for movie soundtracks.

BASIC S.F.C. CONCERT:
Creates sound field suitable for concert material.

BASIC S.F.C. SPORTS:
Creates sound field suitable for sports programs.

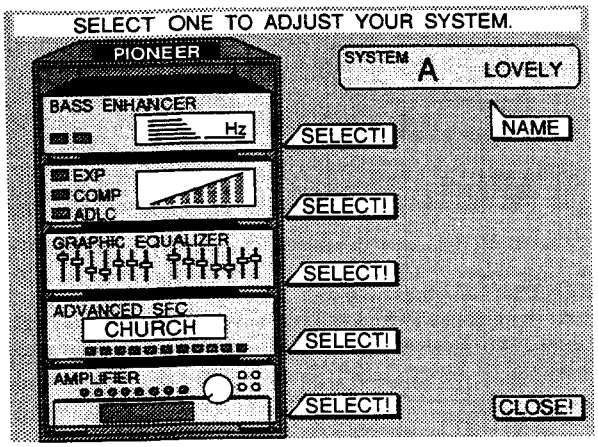
ADVANCED S.F.C.:
For creation of various sound fields based on eight S.F.C. modes and four variable parameters (INITIAL DELAY, LIVENESS EFFECT, ROOM SIZE, WALL TYPE).

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

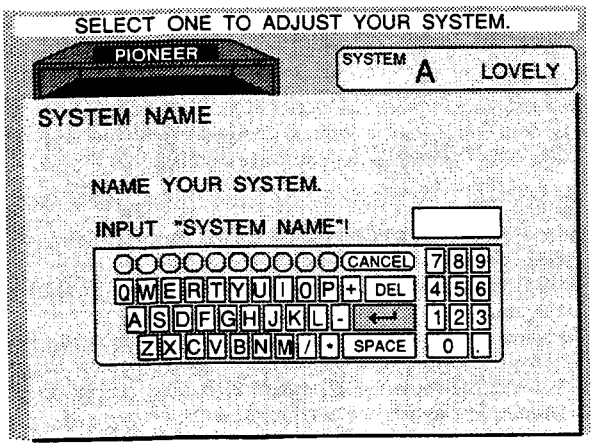
NAMING A SYSTEM

If desired, you can memorize system call characters and display them.

1. **With the A, B, C, or D SYSTEM SELECTOR button, select the system you want to name.**
2. **Press the PARAMETER button on the remote control.**
   - The function component selection menu appears on the TV display.

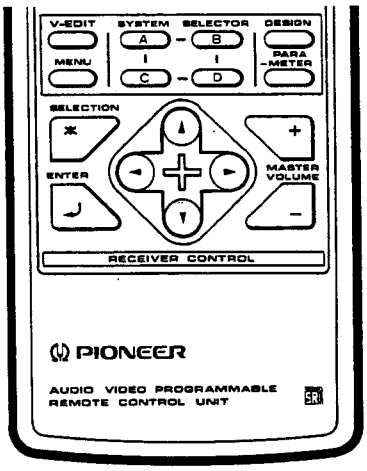


3. **Move the cursor (the hand-shaped mark) to "NAME" with the △, ▽, ◁, and ▷ buttons, and press the ENTER button.**
   - The typewriter keyboard is displayed.

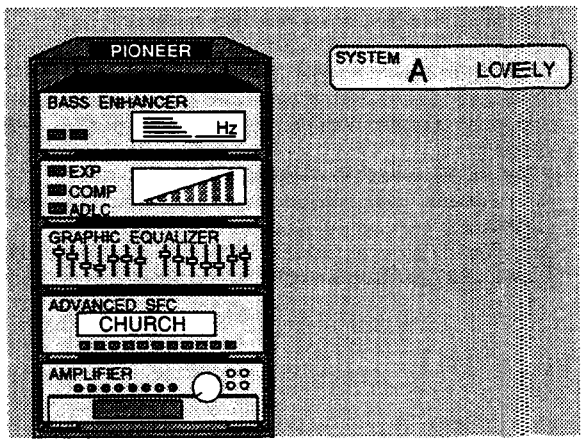

SELECT ONE TO ADJUST YOUR SYSTEM.
PIONEER
SYSTEM A LOVELY
SYSTEM NAME
NAME YOUR SYSTEM.
INPUT "SYSTEM NAME"!
CANCEL
Q W E R T Y U I O P + DEL
A S D F G H J K L - ←
Z X C V B N M / • SPACE
7 8 9
4 5 6
1 2 3
0 .

4. **Select the desired characters from the displayed keyboard (move the cursor to the desired character, and press the ENTER button).**
   - Select numbers from the 10-key pad on the right of the keyboard.
   - When you want a space, select "SPACE".
   - You can select a maximum of six characters.
   - To cancel naming operations, move the cursor to "CANCEL" on the keyboard, and press the ENTER button.

5. **When you have finished naming a system, move the cursor to "↵" (RETURN) on the keyboard, and press the ENTER button.**
   - This returns you to the function component selection menu. If you then move the cursor to "CLOSE!", and press the ENTER button, the function component selection menu is cleared.



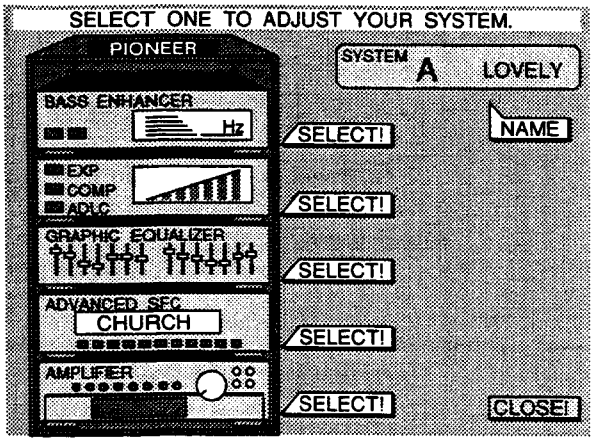
- Press SYSTEM SELECTOR button A, B, C, or D, and the system name and images showing the system configuration are displayed on the TV screen for about five seconds.



PARAMETER CONTROL (GUI OPERATION)

With parameter control, you can specify one of the components in the system, and adjust parameters such as sound quality.

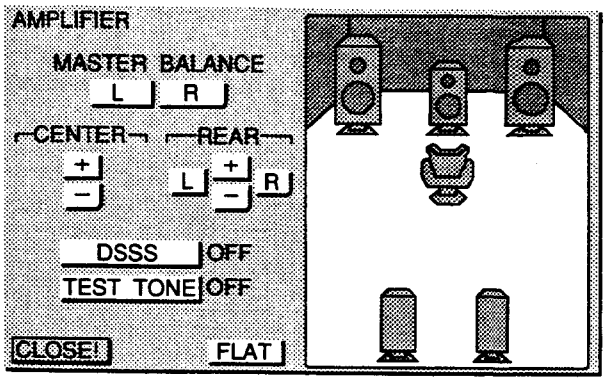
1. **Select the desired system with the SELECTION button or SYSTEM SELECTOR buttons.**
2. **Press the PARAMETER button on the remote control.**
   - The function component selection menu is displayed on the TV screen.



3. **Move the cursor (the hand-shaped mark) to "SELECT!" on the right side of the image of the component you want to make adjustments to with the △, ▽, ◁, and ▷ buttons, and press the ENTER button.**
   - The adjustment menu for the selected function component is displayed.
4. **Move the cursor to the parameter you want to adjust, press the ENTER button, and make adjustments.**
   - Details of each of the component's adjustable parameters follow in the next section.
5. **When you have finished making adjustments, move the cursor to "CLOSE!" at the bottom left, and press the ENTER button.**
   - This returns you to the selection menu.
   - To continue with adjustments of another component's parameters, perform procedures 3 and 4 again.
   - Moving the cursor to "CLOSE!" at the bottom right of selection menu, and pressing the ENTER button, clears the menu.

Adjustment menus of each of the function components

[AMPLIFIER]



MASTER BALANCE (L, R):
Use to adjust overall left and right volume balance. The image of the chair at the right of the menu moves left and right to indicate the balance.

CENTER (+, −):
Use to adjust center channel volume level. The image of the center speaker changes size to indicate changes in volume level.
(Not selectable in STEREO (2 ch.) and PHANTOM (Pro logic).)

REAR (L, R):
Use to adjust rear left and right channel volume balance. The images of the rear speakers on the right of the menu move up and down to indicate rear speaker balance.
(Not selectable in STEREO (2 ch.) and 3CH LOGIC.)

REAR (+, −):
Use to adjust rear channel volume level. The images of the rear speakers change size to indicate changes in volume level. (Not selectable in STEREO (2 ch.) and 3CH LOGIC.)

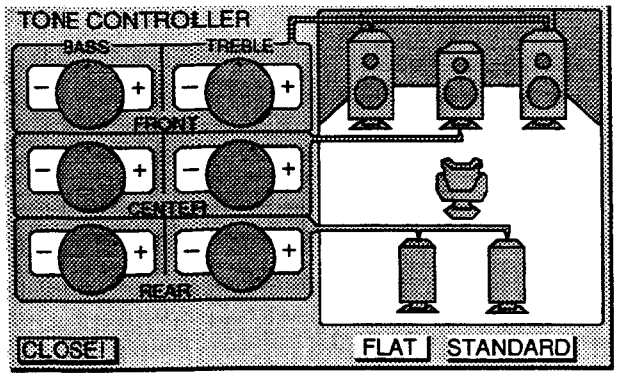
DSSS:
Switches DSSS (Digital Simulated Stereo Sound) ON/OFF.
[DSSS]
Special DSP circuitry gives you simulated stereo sound from monaural sources.
This operates even when a monaural signal is input into both the left and right channels, or only one of the channels. When a signal is input into only one channel, the output level is lower than when the signal is input into both the left and right channels.
You can also enjoy combining it with surround modes other than DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC.

TEST TONE:
Switches the test tone for system volume level balance adjustment ON/OFF. (Not selectable in STEREO (2 ch.).)

FLAT:
Sets volume level balance of all speakers to the initial level settings.

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

[TONE CONTROLLER]



- Enables boosting and attenuation of BASS and TREBLE for the FRONT, CENTER, and REAR channels. (CENTER and REAR are not selectable in STEREO (2 ch.) Rear is not selectable when selecting 3 ch LOGIC with the PRO LOGIC PROCESSOR.)

[+] : Boosts.

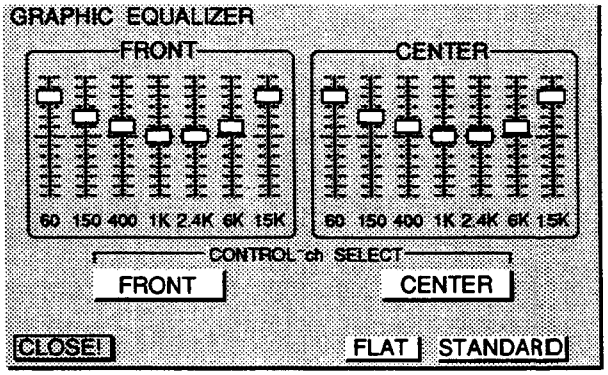
[−] : Attenuates.

FLAT:
Sets all the image operation knobs to the center position for flat frequency response.

STANDARD:
Returns you to the standard settings (only operates when the system is set to MOVIE).

[GRAPHIC EQUALIZER]

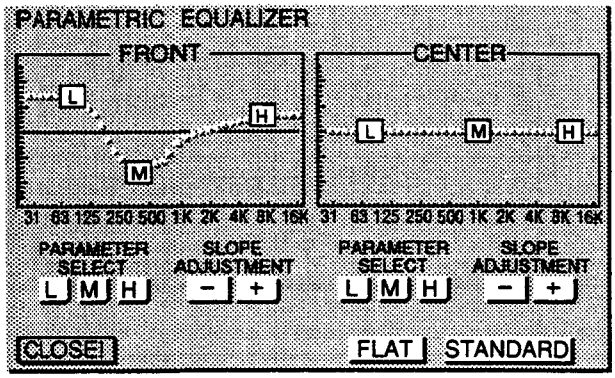
- Enables adjustment of equalization for the front and center channels at 7 frequency points.



1. **Move the cursor to "FRONT", "CENTER", "FLAT", or "STANDARD", and press the ENTER button.**
   - Move the cursor to "FRONT" or "CENTER", press the ENTER button, and the cursor moves to the graphic equalizer image's control sections sliders. ("CENTER" is not selectable in STEREO (2 ch.).)
   - Move the cursor to "FLAT", press the ENTER button, and all the sliders on the graphic equalizer image are set to the center position for flat frequency response.
   - Moving the cursor to "STANDARD" and pressing the ENTER button takes you to the standard settings. (Only operates when the system is CONCERT.)
2. **With the ◁ and ▷ buttons, move the cursor to the frequency you want to adjust, and then attenuate or boost with the △ and ▽ buttons.**
   - To adjust each of the frequencies, repeat procedure 1.
3. **When you have finished adjusting, press the ENTER button.**
   - This returns you to the selection mode mentioned in **1**.

[PARAMETRIC EQUALIZER]

- Enables selection of three frequency points (L, M, and H) for the front and center channels, and adjustment of levels for each point. You can then join the three points to create an equalization curve which is also adjustable. (CENTER is not selectable in STEREO (2 ch.).)

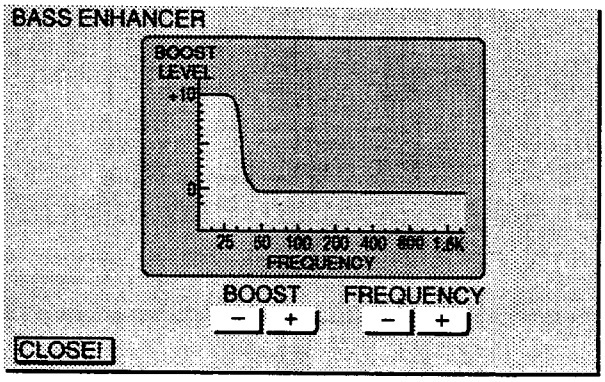


1. **Move the cursor to the frequency point you want to adjust (PARAMETRIC SELECT "L", "M", or "H"), and press the ENTER button.**
   - The cursor moves to the specified point on the image (L, M, or H).
2. **Adjust the frequency and level with the ◁, ▷, △ and ▽ buttons.**
   - The frequencies can be set with the ◁ and ▷ buttons.
   - Use the △ and ▽ buttons to adjust level.
3. **When you have finished frequency point adjustment, press the ENTER button.**
   - Repeat procedures 1 to 3 to adjust each of the L, M, and H frequency points.
4. **Move the cursor to SLOPE ADJUSTMENT "+" or "−", and press the ENTER button.**
   - "+" : Makes the equalization curve created by joining L, M, and H steep around "M".
   - "−" : Makes the equalization curve created by joining L, M, and H more gentle.

Move the cursor to "FLAT" and press the ENTER button for flat frequency response.
Move the cursor to "STANDARD" and press the ENTER button for the standard frequency response. (Only operates when the system is set to SPORTS.)

[BASS ENHANCER]

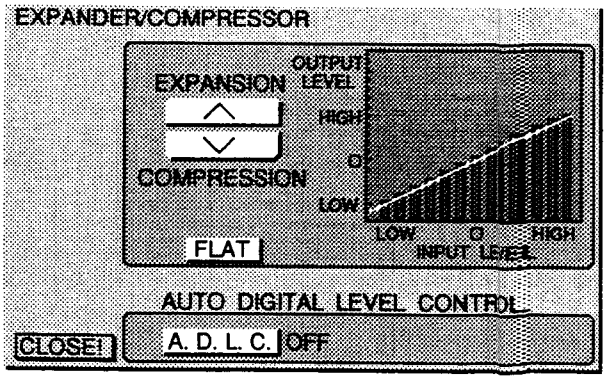
- Enables boosting of bass.



BOOST (+, −): Use to set the degree of boost.
FREQUENCY (+, −)
: Use to set the frequency for boosting.

[EXPANDER/COMPRESSOR]

- Use to expand the dynamic range (make loud sounds louder) of the audio source, or compress it (make faint soundsless faint).
- A.D.L.C. (Automatic Digital Level Controller) can be used. A.D.L.C. automatically compensates for differences in the signal levels of each of the audio sources to assure a more uniform volume level.



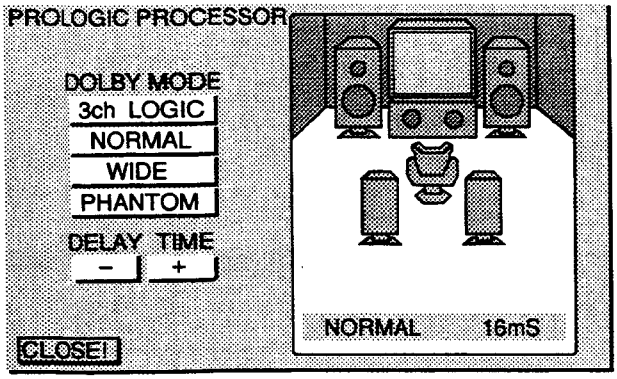
EXPANSION/COMPRESSION (∧, ∨):
3-step expansion and 3-step compression setting is possible, with the normal position in the center.

NOTE:
Neither expansion nor compression operate when A.D.L.C. is ON.
A.D.L.C.: Switches A.D.L.C. ON/OFF.

■ The TV display indications in the illustrations differ slightly from those of an actual TV display.

[PRO LOGIC PROCESSOR]

• For DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC.

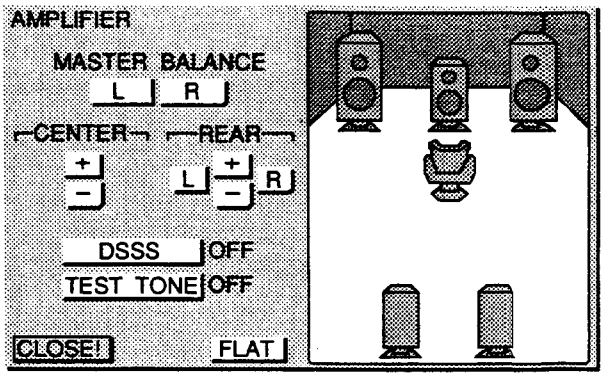


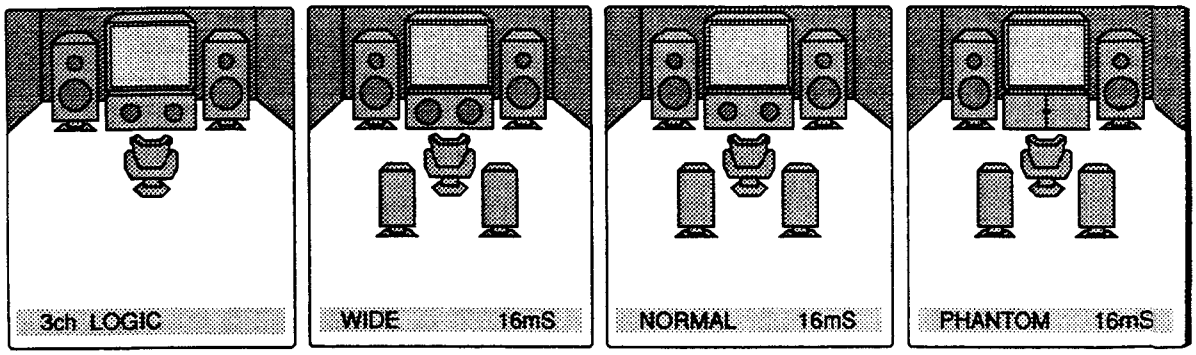
3ch LOGIC : DOLBY 3CH LOGIC (center mode becomes NORMAL).
NORMAL : DOLBY PRO LOGIC SURROUND (center mode becomes NORMAL).
WIDE : DOLBY PRO LOGIC SURROUND (center mode becomes WIDE).
PHANTOM : DOLBY PRO LOGIC SURROUND (center mode becomes PHANTOM).

DELAY TIME (+, −):
When using DOLBY PRO LOGIC SURROUND, you can set the delay time in 2ms steps from 16ms to 30ms. The standard setting is 20ms, but you can select other settings as desired (selection during 3ch LOGIC operation is not possible).

BALANCE ADJUSTMENT
For correct SURROUND reproduction, be sure to perform this adjustment.

1. **After selecting PRO LOGIC and setting to DOLBY MODE, set PARAMETER CONTROL to AMPLIFIER.**
2. **Move the cursor to "FLAT" on the AMPLIFIER menu, and press the ENTER button.**
3. **Set MASTER VOLUME to your usual listening level.**
4. **Move the cursor to "TEST TONE", press the ENTER button, and start the test tone.**
5. **Adjust the balance with each of the balance controls until the volume level from each speaker is the same.**
6. **Move the cursor to "TEST TONE" and press the ENTER button to stop the test tone.**



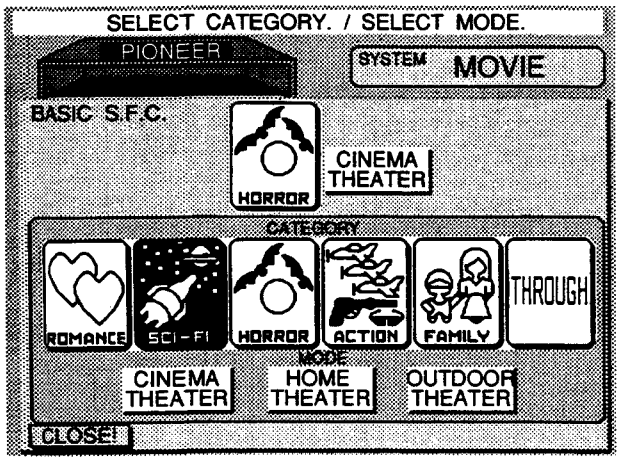


S.F.C. (Sound Field Controller)

This unit's S.F.C. enables the creation of various sound fields based on eight S.F.C. modes and four variable parameters (INITIAL DELAY, LIVENESS EFFECT, ROOM SIZE, WALL TYPE).
The basic S.F.C. lets you choose categories and modes within the MOVIE, CONCERT, and SPORTS presets, to suit your playback source. ADVANCED S.F.C. gives you freedom to set the adjustable elements.
For details on the variable elements and preset contents for variable elements in the BASIC S.F.C. presets, see the separate booklet "Your Invitation To A New Sound Field Experience."

[BASIC S.F.C. (MOVIE)]

- CATEGORY and MODE can be selected.
- The currently selected CATEGORY and MODE are indicated at the top of the selection menu.

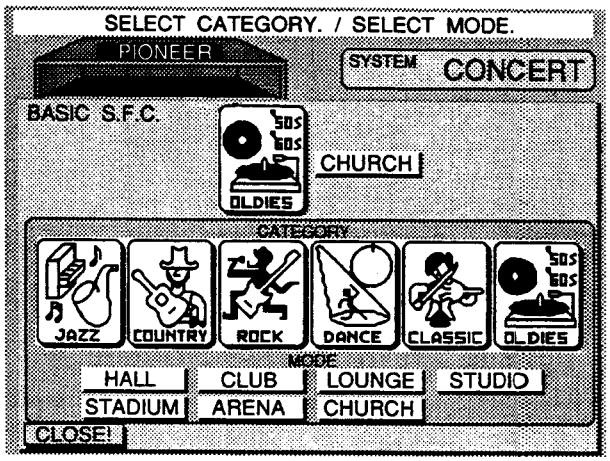


■ **CATEGORY**
Move the cursor to ROMANCE, SCI-FI, HORROR, ACTION, FAMILY, or THROUGH*, and press the ENTER button.
* THROUGH can only be selected when you have selected MOVIE with the SELECTION button, and when PARAMETER CONTROL is for BASIC S.F.C.

■ **MODE**
Move the cursor to CINEMA THEATER, HOME THEATER, or OUTDOOR THEATER, and press the ENTER button.

[BASIC S.F.C. (CONCERT)]

- CATEGORY and MODE can be selected.
- The currently selected CATEGORY and MODE are indicated at the top of the selection menu.

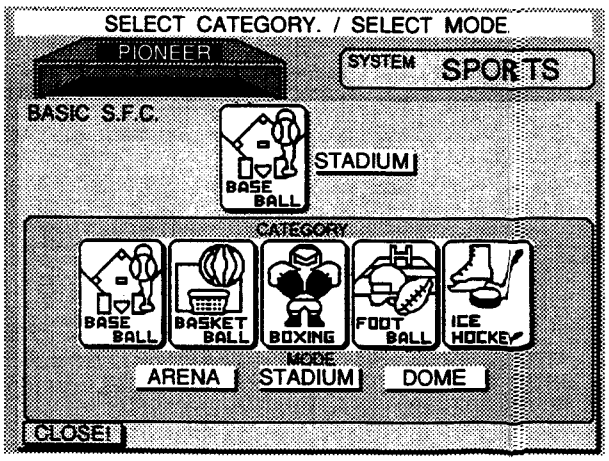


■ **CATEGORY**
Move the cursor to JAZZ, COUNTRY, ROCK, DANCE, CLASSIC, or OLDIES, and press the ENTER button.

■ **MODE**
Move the cursor to HALL, CLUB, LOUNGE, STUDIO, STADIUM, ARENA, or CHURCH, and press the ENTER button.

[BASIC S.F.C. (SPORTS)]

- CATEGORY and MODE can be selected.
- The currently selected CATEGORY and MODE are indicated at the top of the selection menu.



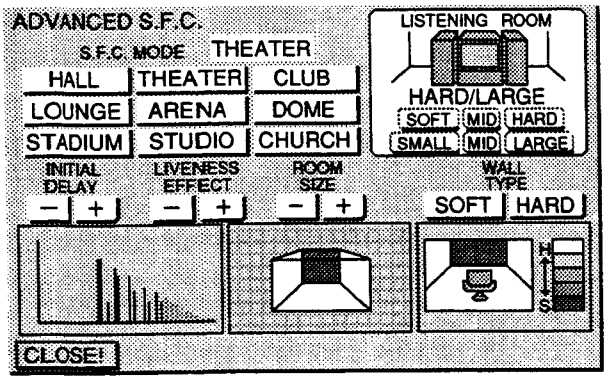
■ **CATEGORY**
Move the cursor to BASEBALL, BASKETBALL, BOXING, FOOTBALL, or ICE HOCKEY, and press the ENTER button.

■ **MODE**
Move the cursor to ARENA, STADIUM, or DOME, and press the ENTER button.

■ **The TV display indications in the illustrations differ slightly from those of an actual TV display.**

[ADVANCED S.F.C.]

- Enables setting of S.F.C MODE, and INITIAL DELAY, LIVENESS EFFECT, ROOM SIZE, and WALL TYPE.



■ S.F.C. MODE
Move the cursor to HALL, THEATER, CLUB, LOUNGE, ARENA, DOME, STADIUM, STUDIO, or CHURCH, and press the ENTER button.

INITIAL DELAY (+, −):
Use to set the initial delay time. Changes in delay time are indicated by the changing position of the first bar on the bar graph image.
LIVENESS EFFECT (+, −):
Use to set the quantity of reflections. Changes in the quantity of reflections are indicated by the change in the length of bars on the bar graph image.
ROOM SIZE (+, −):
Use to set the size of a virtual listening room. Changes in the size of the room are indicated by changes in the size of the box image representing the room.
WALL TYPE (HARD, SOFT):
Use to set the quality of the virtual room's wall material. Changes in wall material quality are indicated by changes in the color of the box image representing the room.
LISTENING ROOM:
Select the appropriate settings for the size of the actual room you are listening in (SMALL/MID/LARGE), and the hardness of the walls and floor (SOFT/MID/HARD).

TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	• Power cord is disconnected. • Instances are rare, but the problem may be due to the operation of the protector circuit.	• Connect cord securely. • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control is not possible regardless of what operation button is pressed.	• Static electricity can affect the unit when the air is dry, such as in winter.	• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. • If static electricity is pronounced, it is recommended that you operate the unit using the remote control unit.
No sound is produced, even when the input selector button is selected.	• Connections are incorrect. • The MUTING button is pressed. • TAPE 2 MONITOR button is in the ON position. • SPEAKERS buttons are turned OFF. • Volume is turned down. • Speaker connecting wires are disconnected from speaker terminals. • One or both of the input cords are disconnected. • Connector bars are disconnected.	• Consult pages 8 — 20 and perform connections correctly. • Press the MUTING button to cancel the MUTING effect. • Press the button again to the OFF position. • Press the SPEAKERS button to turn ON. • Raise volume. • Connect wires to terminals securely. • Connect input cords securely. • Connect bars securely.
Rear sound is not produced.	• The STEREO (2 ch.) mode is set. • DOLBY 3CH LOGIC is ON during playback. • The rear level is set to minimum. • The DIRECT button is set to ON position.	• Set to a mode other than STEREO (2 ch.). • When using DOLBY 3CH LOGIC, there is no sound from the rear channel. • Adjust the rear level. • Set the DIRECT button to off position.
REAR L or R sound is not produced.	• The rear balance is incorrect. • The sound is monaural.	• Adjust the rear balance by GUI operation to correct the balance. • Use the simulated surround mode.
No picture is produced, even when the input selector button is selected.	• Connections are incorrect. • The video signal selector is not set properly. • The VCR and the selected input selector button are not correct.	• Consult pages 8 — 20 and perform connections correctly. • Set correctly. • Press the correct button.
High noise level.	• Station has not been tuned in to correct frequency. • Antenna has not been connected or has become disconnected. **FM reception** • Accessory T-type antenna remains bundled up or it is not pointing in right direction. • Weak broadcasting station signals. **AM reception** • AM loop antenna is not pointing in the right direction. • Weak broadcasting station signals. • Noise being picked up from this unit or other equipment (especially electrical appliances using motor or fluorescent lights).	• Tune in the station correctly. • Connect the antenna securely. • Stretch both ends of antenna taut and locate direction yielding optimum reception. • Replace accessory T-type antenna with outdoor FM antenna. • Change the AM loop antenna's direction and find a position where reception is improved. • Erect outdoor AM antenna or connect ground wire. • Stop using appliances generating noise or remove them from vicinity of stereo equipment. • Separate the loop antenna from the unit by some distance.
No auto stop.	• Input signals are not strong enough.	• (FM) If the T-type antenna is being used, change to an outdoor antenna.

Symptom	Cause	Remedy
TV source cannot be seen when the VCR's TV tuner is used.	• TV antenna is not connected to VCR, or connections are faulty. • You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions of your VCR.	• Consult the VCR's operating instructions, and connect antenna correctly. • Disconnect the copy system connection.
Video tape copies cannot be made with the VCR.	• Video tape copy connections have not been made. • The input selector settings are incorrect.	• Look again closely at the section VIDEO SYSTEM CONNECTIONS on pages 11, 12, and 13, and connect correctly. • Refer to the explanation of VIDEO RECORDING on page 33.
Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window. • A fluorescent light is shining on the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle. • Move so fluorescent light does not shine directly on amplifier front panel remote sensor window.
Sound in MULTI-ROOM & SOURCE Sub room is not produced.	• Main room is in a mode other than STEREO (2 ch.).	• Set to STEREO (2 ch.) mode. • When using surround in Main room, for Sub room, connect the MULTI-ROOM AUDIO OUT jacks to a separate amplifier and operate MULTI-ROOM & SOURCE.
With MULTI-ROOM & SOURCE, remote control of Sub room volume level is not possible.	• For surround in Main room, MULTI-ROOM AUDIO OUT jacks are being used.	• Adjust volume on the amplifier connected to the MULTI-ROOM AUDIO OUT jacks.

Abnormal functioning of this unit may be caused by lightning, static electricity, or other external interference. To restore normal operation, turn the power off and then on again, or unplug the AC power cord and then plug it in again.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzene, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

SPECIFICATIONS

Amplifier section

OUTPUT POWER (POWER AMP IN)

[2 CHANNEL MODE]

Continuous average power output of 125 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 % total harmonic distortion.**

[5 CHANNEL MODE]

Front, center ..... 70 W + 70 W, 70 W (1 kHz, 0.005 %, 8 Ω)
Rear (or MULTI-ROOM) ..... 45 W + 45 W (1 kHz, 0.8 %, 8 Ω)
Dynamic power (2 Ω/4 Ω) ..... 315 W/280 W

Audio section

Input (Sensitivity/Impedance)
PHONO MM ..... 2.5 mV/47 kΩ
CD, TAPE 1, TAPE 2, VIDEO, TV/SAT,
LD, VCR 1, VCR 2 ..... 200 mV/47 kΩ
POWER AMP IN ..... 1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08 %, 1 kHz)
PHONO MM ..... 110 mV
Output (Level/Impedance)
TAPE 1 REC, TAPE 2 REC, VCR 1 OUT, VCR 2 OUT ... 200 mV/2.2 kΩ
Frequency Response
PHONO MM ..... 20 Hz to 20,000 Hz ±0.3 dB
CD, TAPE 1, TAPE 2, VIDEO, TV/SAT,
LD, VCR 1, VCR 2 (DIRECT ON) ..... 20 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio (IHF, short-circuited, A network)
PHONO MM ..... 82 dB
CD, TAPE 1, TAPE 2, VIDEO, TV/SAT,
LD, VCR 1, VCR 2 (DIRECT ON) ..... 98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
PHONO MM ..... 80 dB
CD, TAPE 1, TAPE 2, VIDEO, TV/SAT, LD, VCR 1, VCR 2 ..... 84 dB

VIDEO Section

Input (Sensitivity/Impedance)
VCR 1, VCR 2, LD, TV/SAT, VIDEO ..... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, TO MONITOR TV,
MULTI-ROOM VIDEO OUT ..... 1 Vp-p/75 Ω
Frequency Response
VCR 1, VCR 2, LD, TV/SAT,
VIDEO → TO MONITOR TV ..... 5 Hz to 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ..... 50 dB
Cross Talk ..... 50 dB

[S terminals]

Input (Sensitivity/Impedance)
VCR 1, VCR 2, VIDEO, LD ..... Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, TO MONITOR TV ..... Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Signal-to-Noise Ratio
Luminance signal ..... 50 dB
Cross talk ..... 50 dB

Surround section

Input (Sensitivity/Impedance)
REAR POWER AMP IN ..... 1 V/22 kΩ
CENTER POWER AMP IN ..... 1 V/22 kΩ
Output (Level/Impedance)
REAR PRE AMP OUT ..... 1 V/1 kΩ
CENTER PRE AMP OUT ..... 1 V/1 kΩ

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono; 11.2 dBf, IHF (1.0 µV/75 Ω)
50 dB Quieting Sensitivity ..... Mono; 16.4 dBf, (1.8 µV/75 Ω)
Stereo; 38.2 dBf, (22 µV/75 Ω)
Signal-to-Noise Ratio ..... Mono; 80 dB (at 65 dBf)
Stereo; 76 dB (at 85 dBf)
Distortion ..... Mono; 0.08 % (100 Hz)
0.08 % (1 kHz)
0.2 % (6 kHz)
Stereo; 0.2 % (100 Hz)
0.15 % (1 kHz)
0.3 % (6 kHz)
Capture Ratio ..... 1.0 dB
Alternate Channel Selectivity ..... 65dB (400 kHz)
Stereo Separation ..... 50 dB (1 kHz)
35 dB (30Hz to 15 kHz)
Frequency Response ..... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB
Image Interference Ratio ..... 50 dB
IF Interference Ratio ..... 80 dB
AM Suppression Ratio ..... 55 dB
Spurious Interference Ratio ..... 70 dB
Antenna Input ..... 300 Ω balanced
75 Ω unbalanced

AM Tuner Section

Frequency range ..... When 10 kHz step: 530 kHz to 1,700 kHz
When 9 kHz step: 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 300 µV/m
Selectivity ..... 30 dB
Signal-to-Noise Ratio ..... 50 dB
Image Interference Ratio ..... 40 dB
IF Interference Ratio ..... 60 dB
Antenna ..... loop antenna

Miscellaneous

Power requirements
- U.S., Canadian models ..... AC 120 V, 60 Hz
- Multi-voltage model ..... AC 110/120—127/220/240 V (switchable), 50/60 Hz

Power consumption
- U.S., Canadian models ..... 380 W, 500 VA
- Multi-voltage model ..... 1000 W
- In standby condition ..... 5 W

AC Outlets
- U.S. and Canadian models ..... SWITCHED x 2: TOTAL 100 W (0.8 A) MAX
  UNSWITCHED x 1: 100 W (0.8 A) MAX
- Multi-voltage model ..... SWITCHED x 2: TOTAL 100 W MAX
  UNSWITCHED x 1: 100 W MAX

Dimensions ..... 420 (W) x 162 (H) x 458 (D) mm
16-9/16 (W) x 6-3/8 (H) x 18 (D) in

Weight (without package) ..... 16.0 kg (35 lb 4 oz)

Furnished Parts

FM T-type antenna 1
AM Loop antenna 1
Size "AA" Alkaline batteries (LR6/AM-3) 2
Remote control unit 1
Operating Instructions 1
Supplemental Operating Instructions 1

NOTE:

Specifications and the design are subject to possible modifications without notice due to improvements.

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*

** *Measured by Audio Spectrum Analyzer.*

Dear Customer:

Selecting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to consider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's Consumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come through loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

To establish a safe level:

- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:

- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

We Want You Listening For A Lifetime

Used wisely, your new sound equipment will provide a lifetime of fun and enjoyment. Since hearing damage from loud noise is often undetectable until it is too late, this manufacturer and the Electronic Industries Association's Consumer Electronics Group recommend you avoid prolonged exposure to excessive noise. This list of sound levels is included for your protection.

Decibel Level	Example
30	Quiet library, soft whispers
40	Living room, refrigerator, bedroom away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at two feet.

THE FOLLOWING NOISES CAN BE DANGEROUS UNDER CONSTANT EXPOSURE

90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness Research Foundation.

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